Gendered Preferences in Selecting Physical Education Activity Skills Courses: A Study of a Taiwanese and a United States University

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Abstract

The purposes of this study were to examine the role of basic physical education curriculum in two universities and to ascertain how gender influenced Physical Education (PE) activity skills enrollment over a 10-year period. Researchers employed a cross-cultural quantitative approach. Data collection involved 127,956 students from a Taiwan university and a United States university. Data analysis involved descriptive statistics and multiple regressions calculated with the Statistical Package for Social Sciences (SPSS). The findings reveal differences and significant trends in: (a) the relationship between curriculum structures at the two institutions, (b) gender enrollment over years, and (c) the types of physical education activity skills courses taken.

Keywords: basic physical education program, gender preferences, physical education activity skills courses, intenational, college/university

1. Introduction

Colleges and universities play a key role in instituting educational changes that impact economic and social developments in the larger society. One of the primary roles of higher education is to prepare a skilled and healthy workforce to engender the development of knowledgeable citizenry and to fulfill social and cultural functions in society. Policymakers and political leaders "expect universities to contribute to the well-being of society" (Audretsch, 2014, p. 1018). Colleges and universities are specifically entrusted to produce an effective and functional labor force by putting an emphasis on education (Audretsch, 2014), with a basic physical education (PE) program, as one of the general education requirements, serving as one way to train healthy and productive workers. One could say basic physical education programs contribute to the nation's health and development; thus, having a fit body both in terms of health (absence of disease) and physical viability is critical to advancing social and cultural developments in society. Hensley (2000) stated that approximately one-quarter of students in U.S. colleges and universities took a basic physical education course and thye reported those classes had a positive impact on their lives. Similarly, in Taiwan's public colleges and universities, physical education's aim is to enrich quality of life and develop well-being in a society.

In addition, the subject of PE in higher education, especially in coeducational schools, is most likely to be delivered as a gendered curriculum (Hills & Croston, 2012). Similar to the idea of gender essentialism, the beliefs of gender appropriateness are culturally and functionally compatible with what is perceived as naturally feminine or masculine skills (Sikora, 2014). However, gender difference in curricular offering in PE might cause gender inequality such as privileging male sporting knowledge and experience, adopting different teaching styles for male and female students, and perpetuating masculine hegemony through sport participation as identified as reinforcing and sustaining gender difference (Scraton, 1986, 1992; Wright, 1995; Chepyator-Thomson & Ennis, 1997; Satina, Solman, Donetta, Loftus, & Stockin-Davidson, 1998).

Therefore, the purpose of the present study was to investigate the influence of gender on students' activity preferences in basic physical education programs at universities in two different countries: Taiwan and the United

States.

1.1 Review of Literature

1.1.1 University PE Programs in Taiwan and USA

Universities function as instruments of social change and often serve as the medium through which college students are educated to fulfill professional roles and to gain knowledge about health, helping to avoid diseases that jeopardize optimal functioning in society. Universities and colleges are in a position to help eradicate the obesity epidemic, now a global issue, and to "develop institutional strategies that might educate college students to pursue a healthier lifestyle throughout higher education and beyond" (Deng, Castelli, Castro-Pinero, & Hongwei, 2011, p. 25).

In the United States, changes in student demographics and emerging problems associated with chronic human diseases "present universities with opportunities to improve population health and reduce health inequalities" (Freudenberg et al., 2013, p. 422). In U.S. colleges and universities, approximately 38% of students engage in regular physical activities (Kilpatrick, Hebert, & Bartholomew, 2010), prompting a large percentage of universities (60%) to take critical measures (Jenkins & Alderman, 2011) in developing health-related curricular activities. Universities' attempts to solve this social issue have been primarily through instruction in basic physical education programs, which can be a part of the overall general education of students (Hensley, 2000). These programs serve as a vehicle through which health knowledge is provided to students (Hardin, Andrew, Koo, & Bemiller, 2009), educating them about the health benefits that result from participation in physical activities, thus helping to enhance students' health-related components (Jenkins & Alderman, 2011).

Meanwhile, PE in higher education in Taiwan is aimed to cultivate students' lifelong regular exercise habits and improve their physical and mental wellbeing (Huang, 2017). The PE programs in universities serve as an important mediator related to character development, which demonstrates a relationship between knowledge, values and skills. In other words, the ultimate goal of PE in school is not only to develop one's physical health and mental wellbeing but also enhance one's capabilities of social interaction and collaboration, in addition to the abilities of self-discipline and self-esteem (Lin, Haung & Hsiao, 2014).

1.1.2 Curricular Variations in Student Engagement in Physical Activity or Sport Courses

Increasingly, some universities and colleges are attempting to meet students' needs by offering basic instruction in physical education related to fitness and wellness (Strand, Egeberg, & Mazumdar, 2010). Quite often, basic instruction courses in physical education emphasize lifetime activities (Barfield, Channell, Pugh, Tuck, & Pendel, 2012), with university students taking classes for a variety of reasons: skills learning, health enhancement, and opportunities for social engagement (Crawford, 2007), and engagement in individual or group-oriented activities (Jenkins & Alderman, 2011). Many researchers indicated that students who enrolled in basic physical education courses not only lerned new skills, but also developed regular exercise habits (Lackman, Smith, & McNeill, 2015; Curry, Jenkins, & Weatherford, 2015; Cunningham, 2007; AAHPERD, 2007; Hensley, 2000). For instance, the utilization of sport education curricular activities, as indicated in Jenkins and Alderman's (2011) study, have been taken into account for a lifetime skill classes and competitive sport-based classes which offer opportunities for social cohesion between learners, instructor and learners, groups and teams. University students take classes based on whether they want to exercise singly or in groups. With the value of autonomy itself, students were motivated to learn sports/movement skills effectively and engaged in challenging activities (Jenkins & Alderman, 2011).

However, one may argue that such autonomous choices might become a way to sustain systematic gender difference in field-of-sport choices (Sikora, 2014). Gill (1986) investigated competitiveness among female and male students in college physical activity classes and discovered male students to be more competitive than female students, with a higher number of male students enrolling in team sports classes and female students registering in non-competitive physical activity classes. Later on, Armstrong, O'Bryant, & Costa (2002) discovered that male students preferred basic physical education courses because they were motivated by the need to exercise regularly and to gain lifelong fitness skills, while the female students preferred courses that helped them to maintain desirable weight that focused on fun activities, and promoted social engagements.

1.1.3 Gender Stratification in Social Institutions

Gender differences are seen in the activities in which men and women in higher education partake. In the larger society as well as in institutions of higher education, gender stratification is evident in how men and women occupy varying professional roles, position themselves in differing levels of power, and participate in diverse activities (Klinger & Findenig, 2014). When such stratification is connected to gender, it represents a structure of power, gender regime, and gender construction. As Watts (2013) stated, gender relates to society strutcure, especially in

reference to higher education, and is significantly reflected in the cultural norms and is practiced on a daily basis. Additionally, the structure of an educational institution, as Messner (2003) stated, has "entrenched systems of rules, conventions, allocations of resources and opportunities, and hierarchical authority and status systems" (p. 65). Over the past decades, the challenges between co- and single-sex education have been debated. One study called attention to gender segregation, in which single-sex education fosters sexism and entrenches enduring gender stereotypes (Halpern et al., 2011), while another study found that single-sex education is beneficial to learning environment, conducive to better achievement among male and female students (Park, Behrman, & Choi, 2012).

Gender is most commonly considered to be an individual attribute, in which a person is said to possess traits of masculinity, femininity, or a combination of the two in sociocultural functioning (Messner, 2003). However, as Messner explains, "individuals do not simply import their gendered selves into neutral organizations. Rather, organizations and institutions are themselves 'gendered'; that is, gender is 'present in [an institution's] process, practices, images, ideologies, and distributions of power'" (Messner, 2003, pp. 65-66). That is to say, gender is socially constructed and performed as a biological sex as gender role. Significantly in the academy, the type of social structures and individuals interrelate or become constitutively linked (Bourdieu, 2005), resulting in forms of cultural practices along gender lines.

Elijah, Rintaugu, Eric, & Ngetich (2012) found that cultural physical activities vary according to male and female preferences. As female students prefer individual lifetime activities and male students like team sports, male and female preferences regarding the activities selected have been culturally accepted as masculine and feminine, respectively (Elijah et al., 2012). Sport permits the performance of gender differences, or as Harries (2012) points out, it is the practice of gender segregation. Involvement in sporting activities in physical education classes reveals gender patterns (Chepyator-Thomson & Ennis, 1997), which demonstrate gender stereotyping of physical activity practices. These stereotypes lead to unequal treatment of men and women and influence choice of activity for both genders (Harries, 2012). Both the enactments of Title IX in 1972 in the United States and Gender Equity Education Act in 2004 in Taiwan provide the foundation and motivating ideas for changing the landscape of education; however, the change of attitudes on gender equality must come about through individuals in charge of educational institutions.

1.2 Theoretical Perspectives

Higher education is grounded in culture, and by implication basic physical education and associated student experiences are part and parcel of culture as operationalized in universities. The creation of social and cultural realities in higher education can be comprehended with theoretically grounded perspectives. The concept of cultural production and reproduction is of special importance in trying to understand curriculum and courses used to punctuate students' lives in higher education. Cultural production may be viewed as a system that operationalizes the way people live and function in a given space. The definition of a cultural production system is conceived to be "a set of individuals and organizations that create and market a cultural production" (Jaw, C. Chen, & S. Chen, 2012, p. 258). The main point in cultural production is that people, as stakeholders in social institutions, attempt to construct and negotiate a framework of existence through meanings derived from lived experiences as reflective of the larger society. These stakeholders are the intermediaries between the larger society and institutions; hence, they may be considered as translators of culture. Cultural reproduction refers to complexity in social and cultural norms that come to bear in spaces of culture. Scholars have defined cultural reproduction as "complex ideological and cultural processes that reproduce social norms such as…gender bias, authority strictures, attitudes, values and norms" (Zacharakis & Flora, 2005, p. 293). Moreover, reproduction of gendered consciousness occurs through legislative actions that impact participation in physical activity. It also occurs through cultural prisms of course selection, as they are elements that structure students' lived experiences in universities. Bourdieu's (1977) concept of structure and habitus, as an essential element of reproduction, embodies normative behavior and rules of discourse to construct social reality; hence habitus is a "structuring structure" (p.170), with habitus being built from established norms of the social field, for example in higher education. Bourdieu (1984) provides a formula that shows the interconnection between habitués, capital, and field, revealing the process of praxis: "(Habitus × Capital) + Field = Practice" (p. 101). The interconnection between habitus and cultural capital follows a positive progression and is interdependent. The relationship between habitus and field is grounded in the reproduction of power as implicated in the socialized body. The process of praxis can be viewed as a socialized body that results in production of performances in the field that reflect the larger society's overall culture, and hence, its reproduction. Thus, the habitus of the social field brings out the cultural production and reproduction of activities reflective of the larger society.

1.3 Synthesis of Literature and Gaps to Guide This Study's Purpose

Previous research has been conducted on gendered curricula and gendered educational settings in colleges and

universities worldwide. Research has focused on the core subjects and common cultural institutions. However, physical education, specifically, physical education activity skills courses are rarely studied at all, much less research is focused on their gendered preferences. As we are part of an ever shrinking world, it is also imperative that we study not only physical education activity skills courses nationally, but also look to see what commonalities and differences exist with other countries and cultures of the world. The aim of this study was to conduct research for the purposes of understanding the extent to which culture and gender impact students' activity preferences in basic physical education programs as practiced in two universities located in different countries, Taiwan and the U.S.

2. Method

2.1 Research Context of the Two Institutions

Two public universities located in the southern region of their respective countries—Taiwan (TU) and the United States (USU)—served as the research context for this study. Both universities are nationally recognized institutions of higher education, with undergraduate student enrollment of 26,278 for USU and 21,813 for TU. The USU has a predominately female student body (60%), with a male to female ratio of approximately 4:6, while TU has a predominately male student body (67%), with a male to female ratio of approximately 7:3. This indicates that the two public institutions differ in enrollment by gender. At the USU, most students who attend speak English as their native language and are predominantly European-Americans, while at TU most students speak Mandarin as their official language and are members of four ethnic groups—Hoklo, Hakka, Mainlander, and Aborigines, predominantly of Taiwanese origin. Both institutions offer numerous majors to choose from with a variety of degrees, and both schools require students to enroll in and pass at least one basic physical education course to graduate.

2.2 Curriculum of the Basic Physical Education Programs

The USU has a policy that requires all undergraduate students to enroll in and pass at least one basic physical education activity course (BPEAC) prior to graduation, although a student can take more than one BPEAC during his or her time at the institution. All BPEACs are offered either indoors or outdoors, depending on the sport/activity. Approximately 220 sections of BPEACs are offered each year, and the courses are taught: two times per week for 50 minutes for 16 weeks, twice per week for 1.25 hours for 10 weeks, or three times per week for 50 minutes for 10 weeks. Students can choose from a variety of courses: (a) Fitness-based courses that are designed to promote lifelong physical activity involvement and wellness, such as weight training, aerobic dance, walking, jogging, weight management, body conditioning, and cycling; and (b) sport-based courses that encompass team and individual sports. Team sport examples include basketball, soccer, softball, Ultimate Frisbee, and volleyball. Individual sport examples include golf, bowling, tennis, badminton, and racquetball. All courses are coeducational (both male and female students can enroll in the course).

The TU has a policy that requires all undergraduate students to enroll in and pass at least four basic physical education courses (BPEC) prior to graduation, although a student can take more than four during his or her time at the institution. All BPECs are offered either indoors or outdoors, depending on the sport/activity. Approximately 250 sections of BPEC are offered each year, and the courses are taught once a week for 100 minutes for 18 weeks. Two types of BPECs are offered: (a) health-related physical education content, and (b) sports education for lifelong learning. Students can choose from a variety of courses: (a) fitness-based courses that are designed to promote lifelong physical activity and wellness, such as weight training, yoga, mat core training, body conditioning, walking, water aerobics, and aerobic boxing; (b) sport-based courses that encompass team and individual sports; team sport examples include basketball, soccer, volleyball, softball, and football, and individual sport including golf, tennis, badminton, soft tennis, swimming, and table tennis; and (c) individual activity courses focused on cultural-based activities including Chinese yo-yo, tai-chi, and martial arts. All courses are either coeducational (both male and female students can enroll in the course) or single-sex courses (only male or female students can enroll in the course).

Although the two universities are similar in terms of the types of PE courses they offer, the two institutions differ in terms of curriculum design and policies. The basic physical education program at TU consists of: (a) single-sex courses (either all-male or all-female), and (b) coeducational courses. A male student may only enroll in certain male-only courses or enroll in a coeducational course. Female students, meanwhile, may only enroll in certain female-only courses, or enroll in a coeducational course. Not all courses that are offered as male-only or female-only are offered as a coeducational course. For instance, football is offered solely as a male-only course; there is no coeducational counterpart, so if a male student wants to take football, he must take the male-only football class and participate only with other male students; female students, on the other hand, have no option to take football.

2.3 Data Collection Procedures

A cross-cultural quantitative approach was adopted in this study. The data were collected from both targeted U.S. and Taiwanese higher education institutions. First, the researchers obtained enrollment numbers, by gender, of all students who took BPEACs in the USA and BPECs in Taiwan during a ten-year period. The Office of Institutional Research at the USU provided the researchers with the total number of male and female students enrolled in every single BPEAC offered during the ten-year time frame. The data for the Taiwanese university was obtained from its official institutional website. Second, the researchers input the data into IBM SPSS 20.0 software. The data consisted of five different variables: two different institutions (TDI), physical education curriculum structure (PECS), background variables (BV), physical education courses (PEC), and type of physical education course (TPEC).

2.4 Participants

A total of 127,956 students were enrolled in both BPEACs and BPECs over a 10 year period. The participants were all undergraduate students either full-time or part-time, had a variety of different majors, and were attending the university at that time. The majority of study participants ranged between 18-25 years old and came from diverse cultural and socioeconomic backgrounds.

2.5 Research Questions

The purpose of the study was to investigate ways culture and gender influenced student activity preferences in basic physical education at two universities located in different countries. In this regard, the following questions were used in the examination of the two cross-cultural universities.

1. What differences exist between the two major institutions?
2. What gender preferences exist in types of basic physical education courses (IFT, ISA, and TS) over a ten-year period in the two institutions?
    (i) What types of student activity preferences were influenced by culture in the basic physical education courses?
    (ii) What types of physical education courses were influenced by gender for each institution over a ten-year period?
    (iii) Is there any trend of the enrollment in each category of institutions over the years?

2.6 Data Analyses

The analyses of the data centered on descriptive statistics. Descriptive statistics were calculated for all variables. To provide a better understanding of how gender influences student activity preferences as seen through the distribution of gender enrollment in PE courses from both institutions, descriptive statistics were calculated with Statistical Package for Social Sciences (IBM SPSS version 20 for Mac) to assess the gender enrollment, physical education curriculum structure (PECS), physical education courses (PEC), and type of physical education courses (TPEC) in the cross-cultural settings. Moreover, multiple regression analyses were computed to predict the trends of gender enrollment of each type of physical education course during the sample years.

3. Results

3.1 What Differences Exist Between the Two Major Institutions?

The study findings reveal structural differences underpinned by culture as practiced in the two different institutions and also indicate student activity preferences that are influenced by gender. In reference to the extent to which culture influenced structure of the basic physical education program, descriptive statistics of cross tabulations were used. The findings show that single-sex and coeducational models of physical education curriculum were practiced, as shown in Table 1.

Table 1. Cross-tabulation of Two Different Institutions and P. E. Curriculum Structures

P. E. Curriculum Structures		Two Different Institutions	
		U.S. University	Taiwanese University
Single-Sex	MALE	0.0% (0)	28.3% (36235)
	FEMALE	0.0% (0)	14.8% (18891)
COEDUCATIONAL		44.2%(56510)	12.8% (16320)

The researchers conducted a total percentage with the two institutions and type of physical education curriculum structure, and the results reveal that TU is heavily structured toward a single-sex curriculum (76%), while USU is only structured on a coeducational curriculum (100%). The cross-tabulation of frequencies seen in Table 1 shows that the coeducational courses have a significantly larger proportion of students enrolled at USU than TU, accounting for 44.2% and 12.8%, respectively for the two institutions. Specifically, the single-sex structure at TU offers more courses for males than females, with the percentage of all-male and all-female enrollment being 51% and 26%, respectively. The differences were found in PECS in the two different institutional settings. In the frequency analysis and contingency table analysis, the data demonstrates an interesting percentage of the differentiation in the types of curriculum structure, and also brought into focus the type of school policy used at the two universities. At TU, a centralized model of their school policy was used, and this impacted student enrollment patterns in basic physical education courses, as student activity preferences followed gender lines. At USU, a decentralized model of their school policy was followed, which allowed students to select courses in basic physical education based on their individual preferences. Therefore, the two institutions, in comparison, follow different curriculum models for physical education.

Regarding student activity preferences along gender lines as revealed through course enrollments and years enrolled in basic physical education programs, descriptive statistics analysis was used and is presented in Table 2. One finding of the study is that student activity preferences were influenced by gender, gender differences in enrollment in the two institutions over the ten-year period were found. In Table 2, the data shows a larger proportion of female students enrolled in USU as compared to TU. The overall percentage of female enrollment for the entire university was 60% at USU and 33% at TU. Regarding female enrollment in both basic PE programs, 57.7% of enrollees were female at USU while 37.6% of enrollees were female at TU. Another finding of this study is that regardless of the PE curriculum structure, the gender enrollment in basic physical education programs reflected the general student enrollment of the two universities. Thus, at USU, the majority of the students were female while at TU male students predominated. The descriptive statistics reveal that USU had a stable percentage of students enrolled while TU showed a dramatic enrollment growth in basic physical education programs during the time period under review (see Table 2 and Figure 1).

Table 2. Cross-tabulation of Two Different Institutions, Gender Enrollment, and Year

		Two Different Institutions	
		USU	TU
Gender Enrollment	MALE	18.7% (23915)	34.8% (44576)
	FEMALE	25.5% (32595)	21.0% (26870)
Year	2004	4.6% (5835)	2.1% (2718)
	2005	4.0% (5083)	5.7% (7266)
	2006	4.5% (5800)	5.2% (6690)
	2007	4.3% (5533)	5.1% (6580)
	2008	4.3% (5465)	5.8% (7459)
	2009	4.2% (5337)	6.1% (7841)
	2010	4.0% (5124)	6.6% (8492)

2011	4.3% (5556)	6.6% (8430)
2012	4.8% (6201)	6.3% (8018)
2013	5.1% (6576)	6.2% (7952)

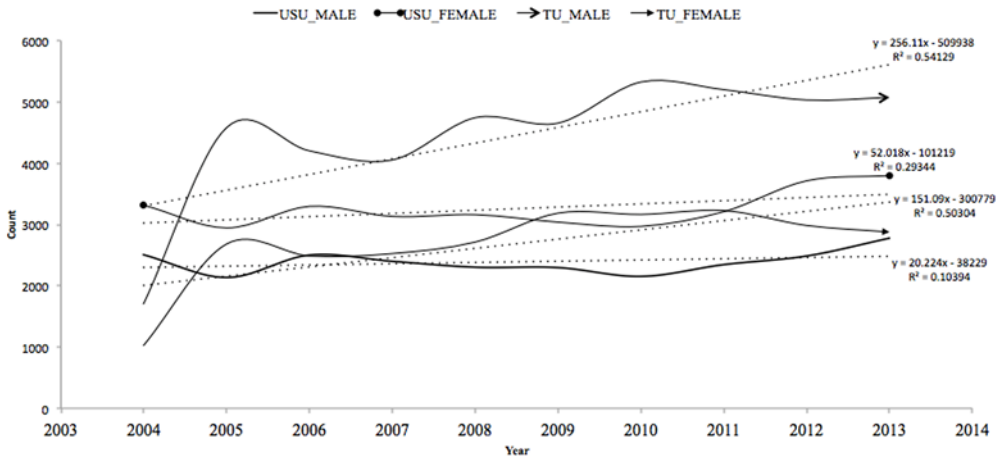

Figure 1. The relationship among Cross-cultural institutions, Year, and Gender Enrollment

3.2 What Gender Preferences Existed in the Type of Basic Physical Education Courses Over a Ten-Year Period in the Two Institutions?

This section concerns the extent to which student activity preferences followed gender lines. In terms of course diversity, tennis, badminton, and table tennis made up the individual sports/activity, while weight training, body conditioning, aerobic dance, and walking belong to the individual fitness training section. For team sports, basketball and volleyball made up this section. The statistical analyses show patterns that are associated with gender in basic physical education courses. The results indicate that a larger proportion of female students (about 40.4% out of total student enrollment) chose courses in individual fitness training (IFT), that is 19.8% (with group mean, M=43%; SD=.494). The IFT mean enrollment was 43% with a SD of .494 indicating a close range among the type of courses classified as IFT. On the other hand, individual sport/activity (ISA) enrollment accounted for 20.6% of the female enrollment, with descriptive means and standard deviations as M=44%; SD=.497 while 44.2% of male students had a preference for individual sport/activity (ISA) with 31.1% enrollment and a M=58%; SD=.493) and team sport (TS) accounted for 13.1%; M=24%; SD=.429 among the courses in Table 3. Also, individual preferences for type of physical education courses at TU was primarily seen in the type of individual sport/activity with mean M=54% and SD=.498 while the majority of USU students enrolled in both types of individual fitness activities (M=36% and SD=.48). The individual sport/activity accounted for a mean, M=49%; SD=.50. The low standard deviation across the groups shows the minimal spread of students' choices within individual types of courses within the activity classification; there are no clear or rigid differences found in the type of physical activity classes in each of these categories, IFT, ISA, and TS, however, there are enrollment differences across gender in these categories, suggesting gender biases and construction on the contribution of these courses to social capital.

Table 3. Descriptive Statistics in Overall Student Enrollment

Overall Students' Enrollment												
	Total Student Enrollment				Female Enrollment				Male Enrollment			
	N	Sum	M	SD	N	%	M	SD	N	%	M	SD
IFT	127956	37310	29%	.454	59465	19.8	43%	.494	68491	9.4	18%	.380
ISA	127956	66097	52%	.500	59465	20.6	44%	.497	68491	31.1	58%	.493
TS	127956	24549	19%	.394	59465	6.1	13%	.338	68491	13.1	24%	.429

Two Different Institutions								
	USU				TU			
	N	Sum	M	SD	N	Sum	M	SD
IFT	56510	20418	36%	.480	71446	16892	24%	.425
ISA	56510	27603	49%	.500	71446	38494	54%	.498
TS	56510	8489	15%	.357	71446	16060	22%	.417

Courses that followed gender lines in the types of individual sport/activity and team sport courses vary across the two different institutions. While the types of individual sport/activity and team sport courses are gender-neutral courses with an equal gender enrollment at USU, both types of courses were predominantly male-oriented at TU, as can be seen in Figure 2. In Figure 1, there is an association between gender enrollment and types of physical education courses taken over the ten-year timeframe. The multiple regression analysis was utilized and shows significant changes in male and female enrollment of IFT, ISA, and TS during the sample years.

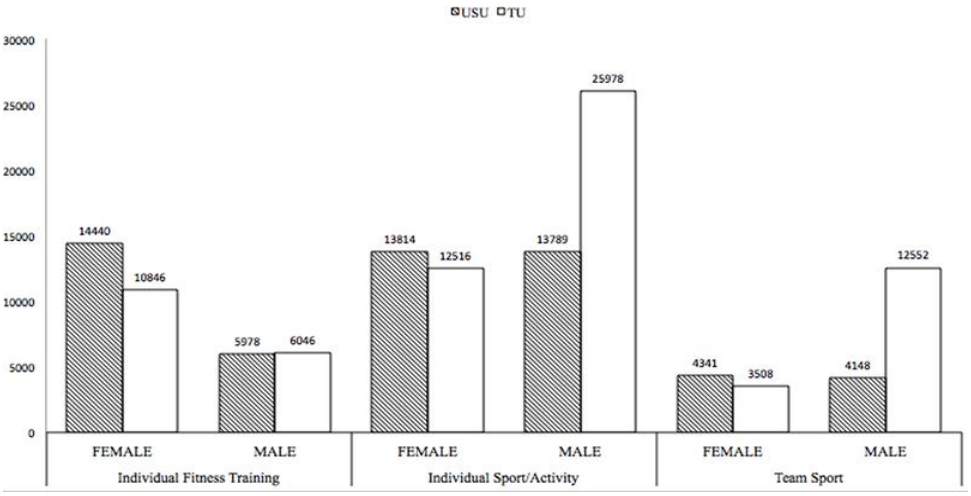

Figure 2. Gender Enrollment in the Type of PE courses in the two Institutions

By running regression analyses, the number of male and female enrollment in individual fitness training courses at USU have significant changes over the years; male enrollment slightly increases with a p-value of less than .05, while female enrollment first decreases then increases with a p-value of less than .05. In Figure 3, on comparing the predicted values from two regression lines, it shows that female enrollment is curved upward while male enrollment is steadily straight upward in individual fitness training courses at USU, with female enrollment being consistently and equally much higher than male enrollment over the ten-year sample period. In contrast, considering the gender

enrollment at TU, significant changes are also identified; male enrollment consistently increases with a p-value of less than .05 while female enrollment first increases and then decreases with a p-value of less than .05.

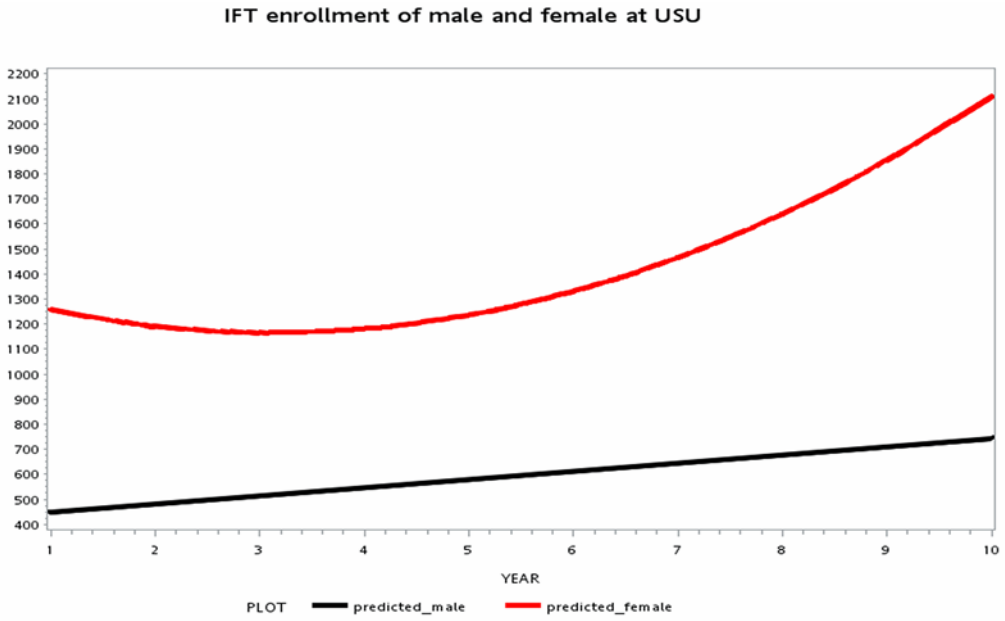

Figure 3. IFT Enrollment of Male and Female at USU

In Figure 4, the two regression lines between male and female enrollment tends to be equivalent. Notably, the findings show that male and female students at TU gradually came to enjoy individual fitness training courses about equally by 2013 although IFT courses have been represented as female-oriented at almost twice the male enrollment according to the descriptive analysis in Figure 2. Correspondingly, gender preference of IFT courses were found consistently and increasingly to be female-oriented in the USU over the ten-year period.

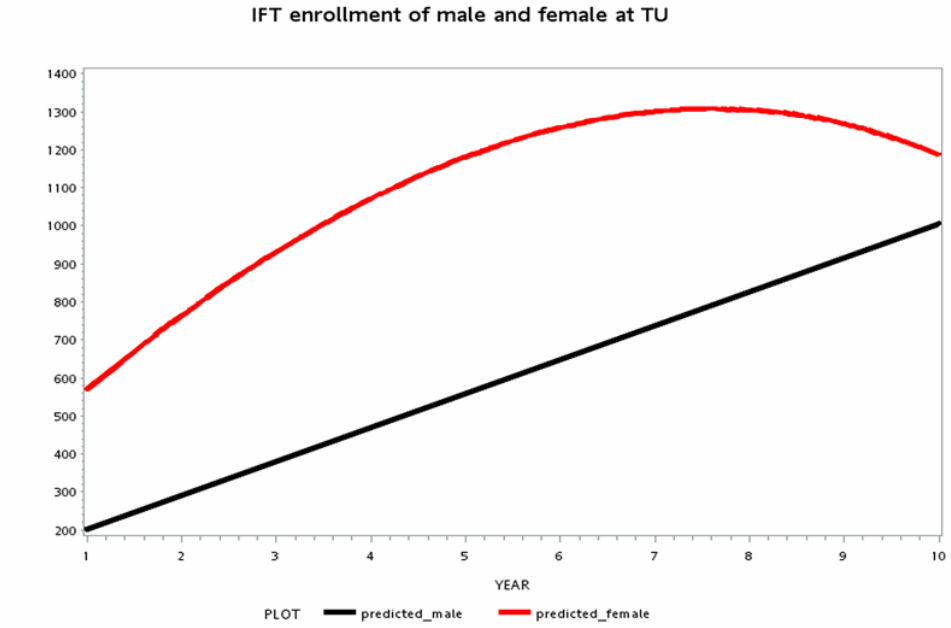

Figure 4. IFT Enrollment of Male and Female at TU

By running regression analyses, male and female enrollments in individual sport/activity courses at USU have significant changes. Male enrollment first decreases then increases with a p-value of less than .05, while female enrollment decreases consistently with a p-value of less than .05. In Figure 5, the two regression lines between male and female enrollment in ISA represents a cross, with the dominated number of female enrollments dramatically changing in 2011. However, at TU, the number of male and female enrollments in ISA became significant over years; male enrollment first increases then decreases with a p-value of less than .05, while female enrollment slightly increases then stabilizes with a p-value of less than .05.

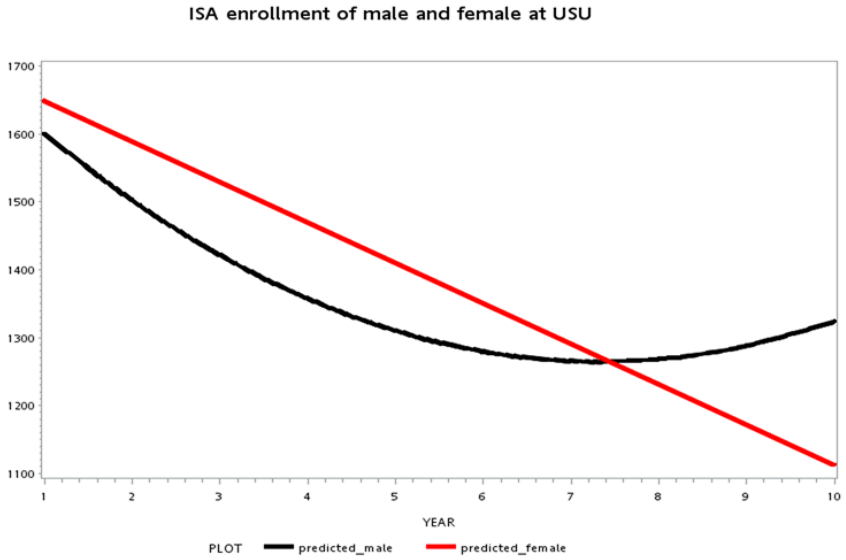

Figure 5. ISA Enrollment of Male and Female at USU

As shown in Figure 6, male enrollment was higher than females in individual sport/activity courses. The two regression lines show a curved shape with the distance between male and female enrollment being nearly closer after 2012. The trends of gender enrollment in the type of individual sport/activity courses tended to become more gender neutral at TU and more male-oriented at USU, rather than an equal gender enrollment at USU and predominantly male-oriented at TU, as is seen in Figure 6.

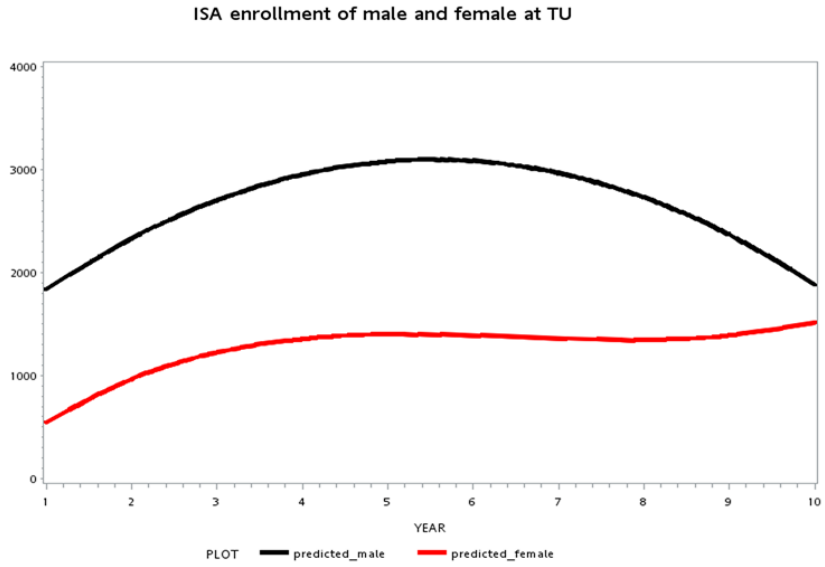

Figure 6. ISA Enrollment of Male and Female at TU

By running regression analyses, male and female enrollments in team sport courses at USU also have significant changes. The rate of male enrollment is higher than that of females and finally dominated female enrollment with p-values of less than .05. In Figure 7, the two regression lines between male and female enrollment in TS represents an X shape. Yet, the TS enrollment at TU shows a different trend. Male enrollment has a significant change while female enrollment does not. Male enrollment consistently increases with a p-value of less than .05, while female enrollment maintains about the same number of enrollments.

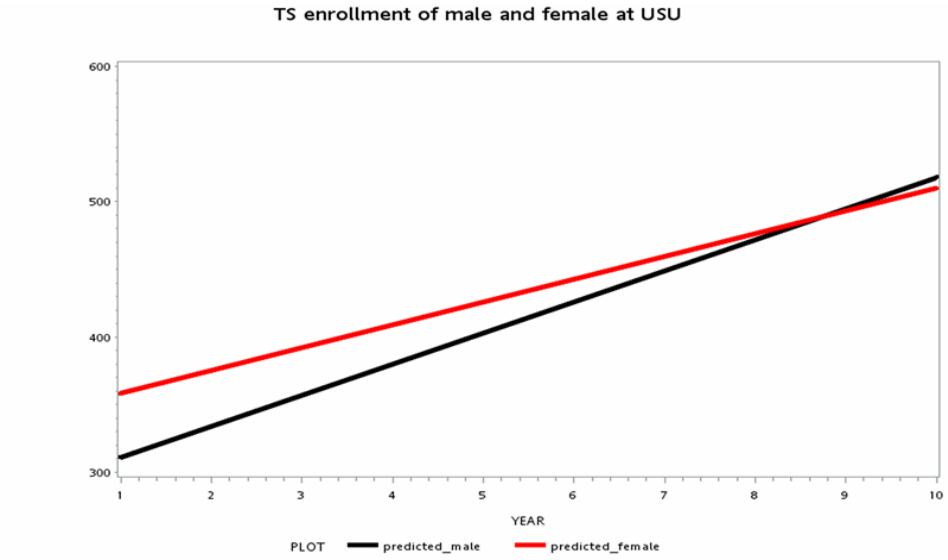

Figure 7. TS Enrollment of Male and Female at USU

As shown in Figure 8, the two regression lines between male and female enrollment at TU represents an acute angle-shape over the ten-year sample period. Both team sport enrollments at USU and TU, compared to the number of gender enrollments in Figure 2, are found to be increasingly male-oriented.

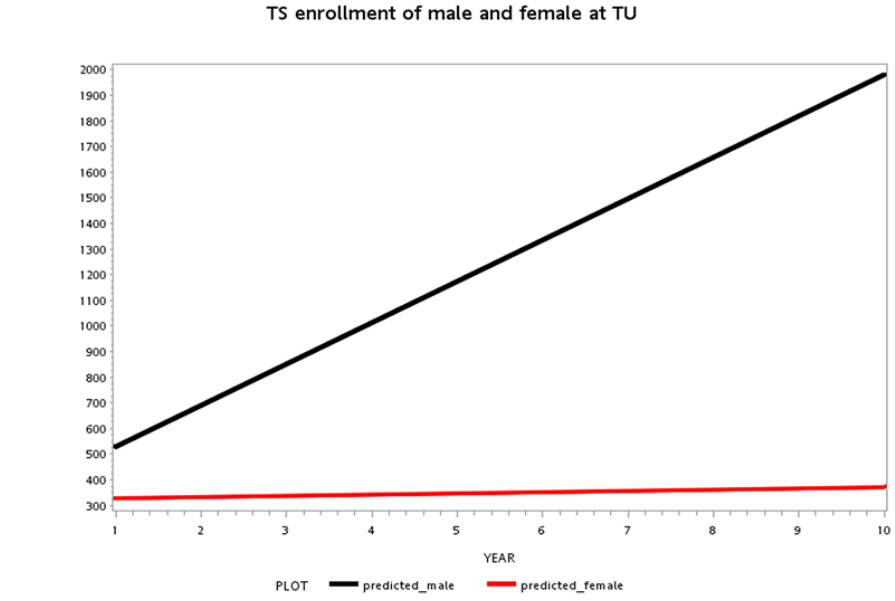

Figure 8. TS Enrollment of Male and Female at TU

The results indicate that male and female students enroll in individual sport/activity and team sport courses in USU's coeducational curriculum. The contrary occurred at TU, as males were pre-dominant in the single-sex curriculum. As for gender preference in a yearly trend, team sports and individual sports/activities became increasingly male-oriented at TU, and a similar trend occurred at USU after 2011. Comparative examination of the two institutional curricula—coeducational and single-sex—the findings revealed gender enrollment to change favoring males' participation or involvement in co-educational ISA and TS courses at USU. In contrast, in TU's curriculum structure, the single-sex education curriculum was followed more often and all-male courses were predominant in team sport courses while more new individual activity courses and co-educational courses in ISA were offered, which indicate a nearly gender-neutral trend over the years.

Further, in the individual fitness training courses that were female-oriented, female students' enrollment was twice their male counterparts across the two institutions. The findings indicate a higher female enrollment in individual fitness training, including health-related sports activities in both institutions over the ten years. Essentially, this indicates that female students preferred individual fitness training courses at USU while female students at TU favored the IFT courses based on the single-sex educational structure; however the males at TU had more individual fitness courses offered, hence its increasing trend over the ten years.

Given that activities in basic physical education courses are underpinned by culture, there appears to be a cultural reproduction of what is institutionally acceptable, which is reflective of society at the two institutions. Overall, women enjoyed individual fitness training courses while men favored team sports; single-sex educational structure was practiced at TU and co-educational structure was followed at USU. Finally, over the ten year-period, males in Taiwan have increasing options for individual fitness and team sports while in USU men increasingly took part in individual sport/activities and team sports.

4. Discussion

Institutions of higher education fulfill social and economic responsibilities to bring positive changes in society. Through the medium of education and use of innovative programs, colleges and universities spur economic growth and prosperity (Lane & Johnston, 2012) and help address social issues such as obesity. Universities and colleges are uniquely positioned to help eradicate the obesity epidemic–which is now a global issue–and to "develop institutional strategies that might educate college students to pursue a healthier lifestyle throughout higher education and beyond" (Deng et al., 2011, p. 25). Indeed, higher education is one of the best environments for young adults to develop healthy behaviors because these institutions have professionally trained personnel and offer state-of-the-art facilities (Keating, Wallace, Schafer, O'Connor, & Shangguan, 2011; Sailors et al., 2010). One of the major goals of basic physical education is to promote lifelong physical activity engagement while students gain skills and health-related knowledge through course offerings (Jenkins & Alderman, 2011). In the United States, sixty percent of colleges and universities have increased health-related course offerings in basic physical education, in response to trends of physical inactivity among young adults (Hensley, 2000). In this study, one United States university (USU) and one Taiwanese university (TU) were studied as two institutions that promote the physical health and well-being of their students through basic instruction in physical education.

The students' choices of which physical education courses to take were seen through the lens of cultural reproduction while the university leaders' decisions were viewed through policies adopted that reflect elements of cultural production. In the context of USU and TU, the curricular activities featured in basic instruction in physical education were conceived to be both cultural productions of their respective universities and reflective of broader societal trends. Similar to Watts's (2013) idea of cultural norms of gender preferences in higher education, the type of curriculum structure found in this current study was linked to the context of structuralization of society, and this was mirrored in practices underpinned by the school policy. Since the enactment of Title IX in 1972 in the United States, single-sex physical education classes have been discontinued and coeducational classes have been formed in educational institutions (Hill, Hannon, & Knowles, 2012). While USU's policy on basic physical education programs is coeducational with students deciding for themselves which courses to take, TU's policy allowed for both single-sex and co-education divisions in their curriculum course structure. Both USU and TU worked as agents of cultural production in that each institution structured its curriculum consistent with the larger societal underpinnings–a legal mandate that informs curricular course offerings in the USA and gendered differentiation of curricular offerings in the Taiwanese university– that brought out how culture was implicated in the university settings.

Regarding cultural reproduction, it appears that students' selection of courses was based on gender. The universities' role in cultural reproduction lies in the identification of curricula activities—individual, team, or fitness—that students select to reproduce gendered consciousness in skills learned and type of activity chosen for participation. In

doing so, universities, whether conscious or not, helped to brand students' construction of reality along gender lines. This current study corroborates the work of Elijah et al. (2012) in showing that male students tend to engage mostly in "ball games and weight training" courses while female students tend to take part in "aerobics, walking/jogging, and swimming classes." Elijah et al. (2012) further indicated that gender influences female involvement in activities, as women tend to favor aerobics and swimming, which was found to be consistent with cultural expectations. Gender could be considered as a "structure that stratifies society" (Hanson, 2007, p. 155), with structure in the context of the current study referring to the ways individuals are channeled through different "doors"—male only, female only, and coeducational—to reproduce social reality. Institutionalization of sport types and practices reflects cultural traditions that often may go unchallenged in terms of relevancy across generations or in varying social spaces. Female and male students who enroll in classes designated for the opposite gender may invoke resistance to the cultural signifiers of existence—type of sport and its relevant practices—bringing to the surface a resistance theory application.

5. Conclusion

Promoters of physical activity need to consider the "impact of social structures on meanings given to physical activity and health which affect actions and 'choices' concerning [engagement in] physical activity" (Lee & MacDonald, 2009, p. 361). For instance, in Taiwan, Article 13 of the Gender Equity Education Act, states that "the school shall not discriminate against a prospective student during recruitment or evaluation of applications for admission on the basis of his or her gender, gender temperaments, gender identity, or sexual orientation. [But] with the approval of the competent authority, this requirement [applied] to schools, classes and curricula with a specific historical tradition, special education objectives, or other reasons unrelated to gender" (Ministry of Education, 2013). As stated in the educational policy, Taiwan instituted gender equality in schools and yet physical education has been considered to have a special educational objective embedded in a specific historical tradition, and as a result, the Gender Equity Act was not necessarily applied to physical education curricula. For example, in the current study, there were gender-specific courses mandated, which is contrary to what the policy required.

Social values are often addressed according to gender, as can be seen in basic physical education programs in schools. In general, achievement and competition are considered to constitute masculine traits while attractiveness and interpersonal skills are viewed as more feminine traits (Eder & Parker, 1987), and as Kessler, Ashenden, Connell, & Dowsett (1985) pointed out, sports like basketball and soccer promote masculine characteristics, such as toughness, competitiveness, and aggression. Female students, on the other hand, tend to prefer "non-masculine" sports such as aerobic dance that stress agility and rhythmic activities. There is evidence from the literature that female students tend to participate in individual fitness training and health-related sports activities while male students choose to participate in team sports and individual sports/activities (Barfield et al., 2012). This study corroborates previous studies (Barfield et al., 2012) that show gender preferences in sports/physical activity participation. In the present study, it was discovered that regardless of structure, single sex or coeducational, in the two institutions, female students' course preferences centered on individual fitness training while the male students' course preferences were on individual sport/activities.

In conclusion, this study finds that public policy plays a critical role in shaping students' direction and involvement in courses in universities' basic physical education curriculum. Student course preferences followed gender lines, albeit underpinned by their respective university policies. Given increasing concerns about obesity in many societies, institutions of higher education have become critical for the education of the young college student population in the areas of knowledge and skills related to lifelong involvement in physical activities. This study found that the two institutions in Taiwan and the United States ward off problems of physical inactivity among the student population and promotes activity preferences as informed by the lens of cultural production and reproduction through policy frameworks practiced in the two different countries.

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