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PRECURSORS OF SPORT PROVISION DIVERSITY ATTITUDES AT COLLEGES IN TAIWAN, UNITED STATES AND VIETNAM

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ABSTRACT

This study aims to cross-examine a model about how personality traits, personal values and perceived cultural values contribute to diversity value orientation (DVO) and attitudes toward sport provision diversity (SDA) in three countries: the United States of America (USA), Taiwan (TW) and Vietnam (VN). A questionnaire was distributed both online (via Google form) and the hard copy and it was completed by 142, 145 and 333 college students in the USA, TW and VN respectively where 48% were males. Convenience sampling was employed via mailing lists, social networks, selected courses and university lecturers. The results showed that the USA group seemed to have higher OE (open to experience), S (stimulation), SD (self-direction) and stronger SDA than the VN group. The TW group was lower than the USA group in OE and S, but higher than the VN group in OE. The analyses of structural equation modeling showed that LPD (low power distance) played as major predictor of DVO and SDA in the model. The explained variance of DVO was 68.8%, whereas SDA was 49.1%. Comparison of the models among the three countries showed that the model worked best in the VN group.

Keywords: Cultural value; Diversity value orientation; Personal value; Power distance; School lifestyle.

INTRODUCTION

Diversity in sports is an important issue and usually defined as equal opportunities in sport participation given to people regardless of whether they come from different cultural, linguistic, or ethnic backgrounds (Taylor & Toohey, 1999; Gau, 2018). However, sport provision diversity at college educational services refers to various resources or opportunities in different types of sports for students to participate or watch in school sport lifestyles (Gau *et al*., 2014; Lin & Gau, 2016; Hong *et al*., 2019; Gau *et al*., 2020) including physical education, sport clubs and any other sport activities. Sport participation and spectatorship diversity talks about a diverse level of sport types for people to play and watch (Gau *et al*., 2014; Lin & Gau, 2016).

Sport provision diversity is related to the sport resources diversity, which in turn refers to the accessibility of various sport resources on campus. For example, a diverse level of sport curriculum and sport activities in terms of sport types in universities can be an important index of sport provision diversity for the potential participation of college students (Gau, 2018). With optimistic sport provision diversity, schools that offer different sports will bring students with positive sport experiences as participants or spectators. School sport life satisfaction can be achieved from a diverse variety of sport experiences.

The reason why this issue is important is that if sport resources are richer, more available and accessible in terms of different types of sports for students on campus to use, students can experience greater benefits with different sport types and will have more chances to do exercise, play sports, foster life skills, strengthen their body, improve health and fulfil the potential of sport talent based on diverse sport interests (Trottier & Robitaille, 2014; Gau *et al*., 2018). It is concerned about not only sport participation in terms of frequency, time and intensity, but also the richness in diverse sport types. For individuals, due to the constraints of time, energy, money and ability, the number or the range of sport types in which they may participate might be limited. However, for a society or a school, if more diversity of sport types are available, it is more likely that people or students can have more choices and enhance higher opportunities to pick up their favourite sports (Gau *et al*., 2017).

For developing sport-friendly campuses, one of important things to consider is the accessibility of diverse sport resources on campus with various sport courts and fields, facility and equipment, different physical education teachers, physical education courses, sport clubs, and sport activities and competition (Gau, 2017; Gau, *et al*., 2018). Students may or may not be aware of the diverse sport resources emphasising the importance of various participation opportunities, which might rely on their attitudes toward sport provision diversity. Accordingly, this could possibly refer to the diversity of value orientation, traits, personal and cultural values of students.

LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

Sport diversity attitude **(SDA)** in this research refers to students' attitudes towards sport provision diversity while sport provision diversity at schools is viewed as various resources or opportunities for students to participate in or watch different types of sports (Hong *et al*., 2019; Gau *et al*., 2020). Toward sport provision diversity, students' attitudes indicate their enduring favourable or unfavourable evaluations and emotional feelings (Gau & Korzenny, 2009; Gau & Kim, 2011). Sport diversity attitudes, therefore, imply awareness, perceived importance and rich opportunities of a diverse level of sport types for people to play and watch (Gau *et al*., 2014; Lin & Gau, 2016; Gau *et al*., 2017).

Diversity *value orientation* (DVO) originated from the definition of universal-diverse orientation (UDO), which refers to awareness and acceptance of both the similarities and differences that exist among people (Miville *et al*., 1999). UDO was conceptualised by three interrelated domains: Behavioural (the desire to experience diverse interactions); Cognitive (the appreciation of similarities and differences between oneself and others); and Affective (feeling of comfort with diverse others) (Fuertes *et al*., 2000). Adjusted from the original UDO, DVO focuses on positive statements of value orientation in order to fit the model as a mediator for the relationships between values and sport diversity attitudes.

How people view diversity can impact their society differently. People's experiences and perspectives on diversity can also influence other people's opinions on diversity. High diversity value oriented people would expect to experience diversity of interactions with others. If people have favourable opinions and views of diversity and understand the existence of similarities and differences among people, their attitudes on sport provision diversity can also be positive. People oriented with high diversity values can consider various sports that they are not familiar with as their new learning opportunities and experiences. Due to different features within different types of sports, different sports may attract different groups of people. This is a great benefit for people, who put themselves in diverse challenges and situations in life. Thus, higher DVO may encourage more positive attitudes toward sport diversity. Therefore, it is hypothesised **(H1)** that DVO will be positively related to SDA.

Influences of various diversity perspectives on sport provision attitudes can work as a tool to understand cultural and individual differences among nations and people. In general, perceptions of differences among people are formed by their cultural factors (race, ethnicity, gender and cultural values) and individual factors (personality functioning and personal values) (Miville *et al*., 1999). Through the understanding of the existence of these two factors, human beings are different from each other and the differences in some cultural values, personality, and personal values can affect people's diversity value orientation and sport diversity attitudes. For example, a cultural value embracing equability, a personality with a disposition of openness to experiences and personal values with emphasis on openness to changes, may tend to be positive in DVO and SDA.

Cultural value of *Power distance* refers to the expectation and acceptance degree of less powerful members of a society to unequal distribution of power. Power distance can be defined as "the degree to which resources and influence are concentrated around a select few" (Ahn & Cunningham, 2007:859). Accordingly, it is likely that low power distance (LPD) in cultural values with more equality for people to pursue their interests, may provide a better atmosphere to have higher DVO and more positive SDA than high power distance does. Ahn and Cunningham (2017:859) found that "countries with a higher power distance are more likely to accept hierarchical structures and inequality within a social system". In other words, countries with a lower power distance are more likely to have an equal power distribution. For example, countries with lower power distance had a higher proportion of women in leadership positions in their sport organisations (Ahn & Cunningham, 2017), indicating lower unequal power distribution between men and women. People who are associated with a lower power distance cultural value can be more open and flexible toward diversity than people associating with higher power distance culture.

People who value equal power distributions are likely to accept varieties of cultures in society and respect different preferences. People having lower power distance cultural value will be more favourable with diversity than people in higher power distance culture. If people accept a low degree of unequally distributed power in their cultures, their attitude on sport provision diversity will also be favourable. Thus, people in lower power distance cultures will be more favourable or acceptable of sport provision diversity, because people feel relatively comfortable with dissimilar sport types meeting different interests and favourites. Consequently, it is hypothesised that lower power distance would be more likely related to higher DVO **(H21)** and more positive SDA **(H22)**. LPD might influence DVO first and then lead to SDA. In other words, DVO might play as a partial mediator for the relationship between LPD and SDA.

Hofstede's data categorised USA among low power distance cultures, but Vietnam among high power distance cultures. Power distance might tend to decrease parallel to the development of society. This could be the case of Vietnam, since Vietnamese economic and political reforms under "Đổi Mới" and Vietnam's integration into the WTO (World Trade Organisation) have a transformative effect on social values. From a historical perspective, the period of interaction with western culture (from the 16th century to the present) has an impact on the changes within Vietnamese social culture. According to the World Bank's report, gender gaps in Vietnam have been narrowing over the past 30 years because of economic and political reforms (World Bank, 2019). Vietnam's higher education also started to reform in the late 90s of the last century. The system of universities and colleges, their structures and training scope and the renewal of learning and teaching have gradually integrated into the regional and world higher education community. The picture is vivid in Vietnam's higher education institutions. Students are provided with more modern equipment and facilities and the flexibility in their study has raised their sense of creativeness and activeness. Students are encouraged to discuss and express opinions freely with their professors, while decisions in universities are often made by taking into account opinions of all lecturers and staff. Power distance is changing nowadays particularly in Vietnam.

Personality - *Open to experience* (OE) is one of the domains used to describe human personality in the Five Factor Model (McCrae & John, 1992; Goldberg, 1993). Openness was considered a basic aspect of personality (McCrae & Costa, 1997). OE involves five facets that include: active imagination, aesthetic sensitivity, attentiveness to inner feelings, preference for variety and novelty, and intellectual curiosity (Costa & McCrae, 1992; Woo *et al*., 2014). McCrae and Costa (1997:830) stressed that open people actively seek out experiences and are apt to be particularly reflective and thoughtful about the ideas they encounter. OE refers to "an individual's propensity to be open to a variety of experiences, with a need to enlarge and examine experience" (Suilleabhain *et al*., 2017:1). This could be considered a global personality trait containing a set of specific traits, habits, and tendencies that cluster together.

Individuals who are open to experience are normally intellectually curious, open to emotion, sensitive to beauty, non-dogmatic in their attitudes, behaviourally flexible, and willing to try new things (McCrae & Costa, 1997). They tend to be, when compared to closed people, more creative, more aware of their feelings and also more likely to hold unconventional beliefs. High openness might be more likely to engage in risky behaviours (Ambridge, 2014). Their openness can be applied to experiencing different cultures. Openness can be more receptive to learn and experience in various cultures and to education teaching a diversity of values. In the sport management literature, Park *et al*. (2015:153) similarly defined openness to experience as the "inclination of individuals to pursue a variety of novel and intellectual ideas". Sport participants who have this personality (openness to experience) can seek out information about a new type of sport in order to examine its benefits. Therefore, OE is likely to be one of the precursors of DVO.

Moreover, in a study with counsellor trainees, one of the Big Five personality traits, OE was shown to positively relate with DVO (Thompson *et al*., 2002). Individuals with high OE are normally intellectually curious, behaviourally flexible and non-dogmatic in their values and attitudes (McCrae & Costa, 1997), have a variety of preference, are willing to try new things, and thus are more likely to have a higher level of diversity value orientation and have a more positive attitude toward sport diversity. Individuals with high OE normally search for open,

intense and euphoric experiences. As a result, personality traits with higher OE tend to be more open, aware of more positively perceived and received sport activities and opportunities with diversity in terms of watching and playing sport types and at different levels. People who are open to new experiences will probably have optimistic and enthusiastic attitudes toward sport provision diversity, because they have high levels of intellectual curiosity and a willingness to learn and experience. Therefore, it is hypothesised that individuals with higher OE are more likely to have a higher level of DVO **(H31)** and have a more positive SDA **(H32)**. OE will be positively related to DVO and SDA. OE might impact DVO and then further influence SDA. A relationship between OE and SDA might be partly mediated by DVO. That is, before forming an attitude towards sport diversity, the diversity value orientation (DVO) might come first.

Personal value - *Stimulation* (S) stems from the needs of presumed organisms for variety. Based on the Schwartz theory of basic values, stimulation shares elements of openness to change with emphasis on independence of thought, action and feelings and readiness for change. Stimulation means the following: Defining goal, excitement, novelty and challenges in life. People with this personal value might produce and experience a varied and exciting life, because stimulation helps people continuously learn for their improvement (Schwartz, 2012). Those who are willing to accept new things and seek variety in life will not only feel comfortable with diversity, but will enjoy new challenges and experiences. They will be curious about new things and tend to have diversity value orientation. They may want to try diverse sport types and activities. Thus, their attitude on sport provision diversity can be favourable and positive. It is hypothesised that stimulation will be positively related to DVO **(H41)** and sport provision diversity attitude (SDA) **(H42)**. It is also possible that S leads to DVO and then DVO influences SDA, indicating that DVO can partially mediate the relationship between S and SDA.

Personal value - *Self-direction* (SD) is another value that tends to be openness to change (Struch *et al*., 2002; Schwartz & Rubel, 2005). Self-direction comes from needs for autonomy. People with a high self-direction value are an independent creator and learner. They are curious and self-sufficient and keep choosing their goals and learnings in life. Thus, self-direction's broadest meaning is self-directed learning (Knowles, 1975). Self-directed learners are proactive and they learn with high motivation. They are open to use all available and appropriate resources in their learning process. University students can develop their personal value on diversity by a self-directed learning skill within their environments. Highly self-directed people can also have high levels of self-motivated eagerness to learn and experience and concentration on new things. Thus, they can be comfortable with diversity value, favourable on new types of sport and positive toward sport diversity. It is hypothesised that self-direction will be positively related to DVO **(H51)** and sport provision diversity attitude (SDA) **(H52)**.

PURPOSE OF RESEARCH

The purpose of this study aims to cross-examine a model about sport provision diversity of college lifestyles in three countries: Taiwan (TW), United States of America (USA) and Vietnam (VN). This model attempts to explain how personality traits, personal values and perceived cultural values contribute to diversity value orientation and attitudes toward sport provision diversity in college lives.

METHODOLOGY

Research framework

Prior studies have revealed that values are determinants of attitudes (Rokeach, 1973, 1979). In this study, diversity value orientation (DVO) (model mediator variable) can be a stronger determinant of attitudes toward sport provision diversity (SDA) than four independent variables. In other words, this specific sport diversity attitude can be positive for those who already have the features of diversity values. Because the diversity value orientation can be directly extended or applied to the field of the sporting setting about sport's diversity, the mediator variable (diversity value orientation) can be a powerful contributing factor for sport provision diversity attitude. Furthermore, by the core nature of diversity, DVO and SDA can be directly or indirectly generated by low power distance (LPD) cultural value, personal values of stimulation (S), self-direction (SD) and the personality trait, open to experience (OE), as reasoned in the literature review (Figure 1).

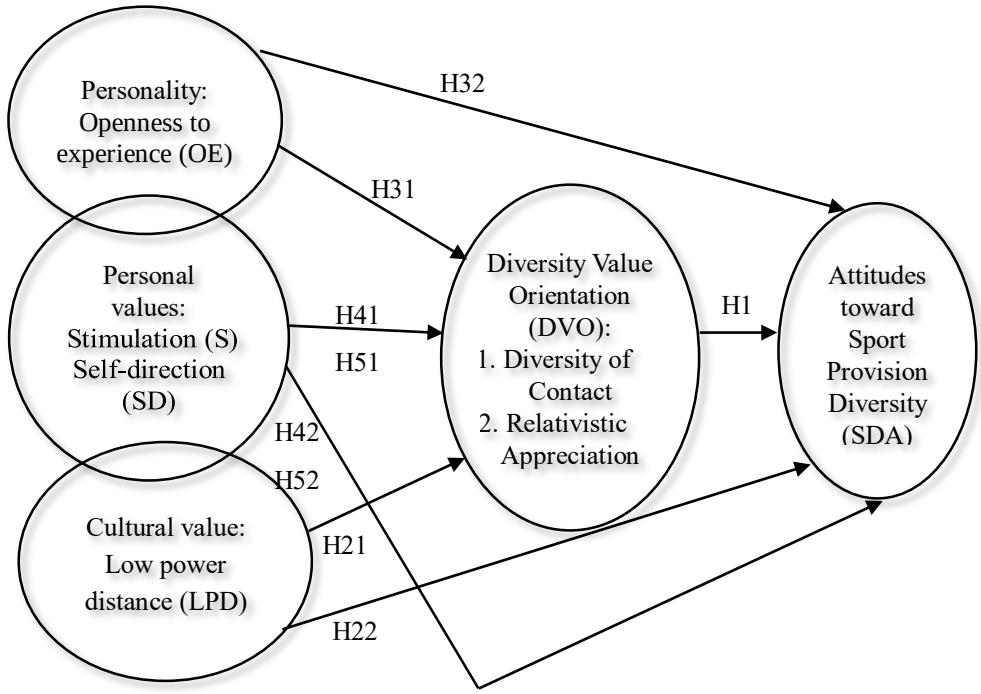

Figure 1. **RESEARCH FRAMEWORK**

Mediation

For the current study, a mediation model seeks to identify the model that describes an explained relationship between four independent variables (power distance, open to experience, stimulation, and self-direction) and a dependent variable (sport provision diversity attitude) through the addition of a third theoretical variable, known as a mediator variable (diversity value orientation). Rather than a direct relationship between the independent variables and the dependent variable, a mediation model suggests that the independent variables influence the mediator variable, which in turn influences the dependent variable. Thus, the mediator variable aids to clarify the nature of the relationship between the independent and dependent variables.

Data collection

In order to cross-examine how personality traits, personal values and perceived cultural values contribute to diversity value orientation and attitudes toward sport provision diversity in college lives, a survey questionnaire was conducted at various universities in three countries of the USA, Taiwan and Vietnam. The questionnaire was designed with a seven-point Likert scale and distributed by both online (via Google form) and hard copy on paper. Convenience or opportunity sampling method was employed to collect data for this research.

In total, 620 college students were recruited via mailing lists, social networks, selected courses and university lecturers with 48% males. Unequal sample sizes of each country were acquired depending on the sampling method, student availability and other factors such as time and convenience of collecting the data. Details of data collection, data sampling and participants' demographic information for each of the three national samples are presented as follows.

In the *USA* sample, 142 university students were recruited from selected undergraduate and graduate courses from a university located in the north-eastern United States. Respondents, all of whom agreed to participate in paper questionnaires, consisted of 90 men and 51 women (with one missing who did not answer all the questions). Participants of the USA sample were mostly white or Caucasian (58%), followed by Asian or pacific islanders (20%) and black or African American (15%).

In the *Vietnam* sample, a total of 333 questionnaires were collected in Vietnam with 134 males and 199 females participating. The survey was conducted among university students from the northern region of Vietnam. Participants were recruited via mailing lists, social networks, and university lecturers and referred to a QR-code or a Google form connection. The majority of participants are Kinh people. In the *Taiwan* sample, a total of 145 valid questionnaires were collected from students from five colleges who were recruited via social networks, with 75 males and 70 females completing questionnaires. Most of participants (n=116) answered the printed paper survey while a few (n=29) completed the survey online. The ethnic information was not collected in this sample because the majority of residents in Taiwan basically share the similar ethnic background.

Measurement

A survey questionnaire was created and conducted in three countries, USA, Taiwan, and Vietnam, among college students. The questionnaire contained six variables: one personality trait (Openness to experience-OE, 5 items), two personal values (self-direction-SD, 5 items,

and stimulation-S, 3 items), one perceived cultural value (low power distance-LPD, 5 items), diversity value orientation (DVO, 8 items) and attitudes toward sport provision diversity (SDA, 6 items). There were 32 items in the model. Respondents were asked to evaluate "to what degree they agree with these statements" on a seven-point Likert scale, in which "strongly disagree" equals (1) and "strongly agree" equals (7). All scales were created based on previous studies with accepted validity in English and then translated into Vietnamese and Chinese along with a back-translation to validate the Vietnamese and Chinese versions.

SDA (dependent variable) was measured with 6 items extracted with a combination of sport attitudes (Gau & Korzenny, 2009; Gau & Kim, 2011) and a validated sport resource diversity scale (Gau, 2017, 2018; Gau *et al*., 2018). **DVO** (mediating variable) was measured with 8 items extracted from Miville-Guzman Universality-Diversity Scale – Short Form (M-GUDS-S) (n.d.), in which four items were related to "Diversity of Contact – students' interest in participating in diverse social and cultural activities", while another four items were related to "Relativistic Appreciation – the extent to which students value the impact of diversity on self-understanding and personal growth". **LPD** was measured with 5 items primarily extracted with revision from the Values Survey Module 2013 Questionnaire (Hofstede, 2013). OE was measured with 5 statement items extracted from the **NEO** personality inventory (Costa & McCrae, 1985) and Mini-Marker (Saucier, 1994) referring to curiosity, imagination, creativity and intellectual interest. **S** and **SD** were measured with 3 and 5 items respectively from Portrait Values Questionnaire (PVQ) (Schwartz *et al*., 2001; Schwartz, 2012).

Analysis of data

Firstly, Cronbach's Alphas were used to examine the scale reliabilities for the four independent variables, the mediator and the dependent variable. Then, descriptive analyses were conducted and analysis of variance (ANOVA) was used to make comparisons among the three national groups. Further, a confirmatory factor analysis (CFA) was computed using the AMOS (analysis of moment structures) software to verify the measurement quality of the six variables. Finally, along with the analyses of the Pearson correlation coefficients and regression analyses, structural equation modeling (SEM) was conducted to test the model and all hypotheses.

For the practices of structural equation modeling, it was suggested that the sample size in multi-group modeling was 100 cases or observations per group as a rule of thumb (Kline, 2005). In this study, each national group has more than 100 participants. Additionally, as another widely accepted rule of thumb, a ratio of 5-10 cases or observations per item in the model was considered adequate for a sample size (Nunnally, 1967; Bentler & Chou, 1987). The model in this study contains 32 items and might need a sample size between 160 and 320. Therefore, the sample size 620 of this study would be sufficient.

Ethical considerations

All data were collected anonymously by means of questionnaires in three countries. No identifying information can link to participants and researchers could not identify any specific participant. Participation in this survey took approximately 10-15 minutes. All participants were informed that they could discontinue the survey at any time if they wanted to, without any penalty or loss. This study did not involve any greater than minimal risk, and was exempted from review by IRB (Institutional Review Board).

RESULTS AND DISCUSSION

Reliability and comparison analysis

Table 1. **MEANS OF FOUR INDEPENDENT VARIABLES**

	Independent variables	Cron-bach α	Total	USA	TW	VN
	LPD (Low Power Distance)	0.840	5.427	5.542	5.324	5.423
LPD1	Everyone should be treated equally, even if the person is the boss.		5.634	5.514	5.531	5.730
LPD2	I want to participate in a decision making process especially if it is concerning my welfare.		5.771	6.007	5.662	5.718
LPD3	I dare to express different views with teachers.		4.889	4.979	4.910	4.841
LPD4	I think the ideal teacher should take the initiative to listen to students' opinions.		5.802	6.176	5.683	5.694
LPD5	I cannot always comply with teachers on everything.		5.040	5.035	4.834	5.132
	OE (Open to Experience)	0.823	4.858	5.473	5.072	4.503
OE1	I sometimes have different reactions or opinions from others.		4.531	5.268	5.290	3.886
OE2	I can accept new things and try to form a new concept.		5.079	5.662	5.317	4.727
OE3	I can fully grasp new things in a short time.		4.832	5.407	4.772	4.613
OE4	I am very curious.		5.156	5.746	5.276	4.853
OE5	I am very creative.		4.692	5.282	4.703	4.435
	S (Stimulation)	0.850	5.229	5.650	5.102	5.105
S1	I look for adventures and like to take risks.		4.971	5.317	5.159	4.742
S2	I want to have an exciting life.		5.461	6.120	5.055	5.357
S3	I like surprises and am always looking for new things to do.		5.255	5.514	5.091	5.216
	SD (Self Direction)	0.867	5.378	5.625	5.436	5.248
SD1	It is important to me to make my own decisions about what I do.		5.544	5.979	5.524	5.366
SD2	I like to be free and not depend on others.		5.597	5.817	5.290	5.637
SD3	I want to do things independently instead of following others.		5.237	5.458	5.545	5.009
SD4	I prefer do things my own way.		5.260	5.465	5.497	5.069
SD5	Thinking up new ideas and being creative is important to me.		5.255	5.408	5.324	5.159

Table 2. **MEANS OF MEDIATOR AND DEPENDENT VARIABLE**

Variables and items	Cron-bach α	Total	USA	TW	VN
DVO (Diversity Value Orientation)	0.832	5.375	5.189	5.382	5.452
DVO - Diversity of Contact	0.882	5.272	4.872	5.339	5.414
1. I am interested in learning about the many cultures that have existed in this world.		5.498	5.577	5.372	5.520
2. I would like to join an organisation that allows me get to know people from different countries.		5.279	5.028	5.331	5.363
3. I attend events when I might get to know people from different racial backgrounds.		5.198	4.621	5.362	5.372
4. I would like to appreciate alternate dances from various countries.		5.115	4.261	5.290	5.402
DVO - Relativistic Appreciation	0.889	5.478	5.507	5.426	5.489
5. In getting to know someone, I would like to know how they differ from me or are similar to me.		5.398	5.556	5.345	5.354
6. I will have better understanding of others after I get to know how they are different or similar to me.		5.511	5.563	5.428	5.526
7. Knowing how a person differs from me would enhance our friendship.		5.469	5.359	5.538	5.486
8. People with disabilities can teach me things I could not learn elsewhere.		5.534	5.549	5.393	5.589
SDA (Sport Diversity Attitude)	0.931	5.273	5.457	5.386	5.146
1. I think students learning various types of sport in school is very important.		5.125	5.265	5.054	5.096
2. I think the school arranging a variety of exercise classes is very important		5.182	5.218	5.283	5.123
3. I think having a lot of different sport coaches in school is very important.		5.082	5.232	5.287	4.928
4. I think that the school providing a wealth of sports facilities and equipment is very important.		5.511	5.817	5.669	5.312
5. I think that the school having diverse sports venues is very important.		5.426	5.591	5.724	5.225
6. I think the school offering a variety of sports viewing experience is very important.		5.315	5.620	5.297	5.192

Scale reliabilities measured by Cronbach's Alphas for the four independent variables were between 0.823 and 0.867 (Table 1), while the reliabilities of the mediator and the dependent variable were between 0.832 and 0.931 (Table 2). For OE, the mean (5.47) of the USA group was the highest whereas the mean (4.50) of the VN group was the lowest.

Analysis of variance showed that the differences among these three countries were significant ($p<0.05$) (USA>TW, 5.07>VN). For SD, the mean (5.63) of the USA group was significantly higher than the mean (5.25) of the VN group ($p<0.05$) (USA>VN). For S, the means of the TW (5.10) and VN (5.11) groups were similar, and significantly lower than the mean (5.65) of the USA group ($p<0.05$) (USA>TW and USA>VN).

For LPD, no significant differences were found among these three countries, which might not be consistent with Hofstede's data (2015). Hofstede's data indicated that the USA tended to have lower power distance (power distance index of USA=40 within the 0-100 range) while VN tended to have higher power distance (power distance index of VN=70). However, this study found that the power distance level of Vietnamese students, who participated in the study, was low. The research findings seemed to reflect changes in cultural values in the Vietnamese society in general and in universities in particular, as explained in the literature review.

For DVO, no significant differences were found among these three countries. For SDA, the mean (5.46) of the USA group was significantly higher than the mean (5.15) of the VN group ($p<0.05$). The USA group seemed to have higher OE, S and SD and have stronger sport diversity attitudes than the VN group. This supported the hypotheses (H32, H42, H52) that higher OE, S and SD could contribute to more positive attitudes toward sport provision diversity in the analysis unit of nations.

Correlation and confirmatory factor analysis

The analyses of the Pearson correlation coefficients among the six variables showed that coefficients were between 0.462 and 0.704 (Table 3), indicating all hypotheses were supported. This was followed by a confirmatory factor analysis (CFA) using the AMOS (analysis of moment structures) software to verify the internal consistency and the validity of the six variables. The results revealed that individual item loadings of OE1 (0.529), LPD3 (0.610), LPD5 (0.617), SD3 (0.657), and SD4 (0.683) did not load at the recommended 0.707 level (Fornell & Larcker, 1981) and consequently, were discarded in the subsequent analysis of structural equation modeling (SEM).

Table 3. **CORRELATION COEFFICIENTS AMONG SIX VARIABLES**

Variables	**CR**	**AVE**	**LPD**	**OE**	**S**	**SD**	**DVO**	**SDA**
LPD (Low Power Distance)	0.85	0.65		0.278	0.381	0.490	0.496	0.315
OE (Open to Experience)	0.83	0.54	0.527		0.375	0.413	0.228	0.213
S (Stimulation)	0.86	0.66	0.617	0.612		0.429	0.350	0.260
SD (Self Direction)	0.83	0.63	0.700	0.643	0.655		0.362	0.272
DVO (Diversity Value Orientation)	0.87	0.77	0.704	0.478	0.592	0.602		0.312
SDA (Sport Diversity Attitude)	0.93	0.69	0.561	0.462	0.510	0.522	0.559	

CR=Construct Reliability AVE=Average Variance extracted. Correlation significant ($p<0.05$)=Grey areas
The right-upper side shows squares of correlations among variables.

The measurement model fit was acceptable with a ratio of Chi-square to degree of freedom 2.967, RMSEA 0.056, CFI 0.949, IFI 0.949, TLI 0.942, NFI 0.925 and RFI 0.915. The construct reliabilities for the six variables ranged from 0.83 to 0.93, which exceeded the minimum level (0.70) recommended by Nunnally and Bernstein (1994). All the measures of average variance extracted (AVE) were higher than 0.50, indicating that the amount of variance explained by the constructs was greater than the variance explained by measurement error (Fornell & Larcker, 1981; Gau *et al*., 2009). For the discriminant validity, the AVE of a construct was compared to shared variances (represented by the square of the correlations) between the construct and the other variables (Fornell & Larcker, 1981; Gau *et al*., 2010). The AVE of each construct was higher than the squares of the correlations between the construct and the other five constructs (Table 3), indicating that discriminant validities were met.

Structural equation modelling

A structural equation model (SEM) was analysed using AMOS. Model fit, path coefficients, and R square values were examined using the overall sample (N=620). The results indicated the model fit was acceptable with a ratio of Chi-square to degree of freedom 2.967, RMSEA 0.056, CFI 0.949, IFI 0.949, TLI 0.942, NFI 0.925 and RFI 0.915. The parameter estimates for each path are shown in Figure 2. The path (0.273) between DVO and SDA was significant and moderate, indicating H1 was supported. The paths between LPD and DVO (0.562) and between LPD and SDA (0.459) were significant, indicating that H21 and H22 were supported and that DVO partially mediated the relationship between LPD and SDA. The result indicated that low power distance (LPD) was a major predictor of diversity value orientation (DVO) and sport diversity attitudes (SDA) in the model with positive relationships between LPD and DVO and between LPD and SDA (Figure 2).

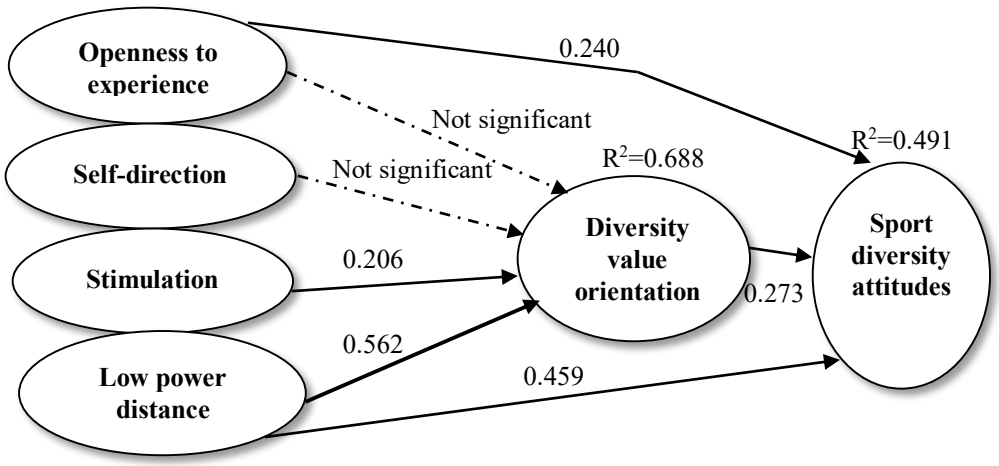

Figure 2. **RESULTS OF STRUCTURAL EQUATION MODELING**

The path (0.206) between S and DVO was significant and DVO fully mediated the relationship between S and SDA. H41 was supported and H42 was indirectly supported. The path (0.240) between OE and SDA was significant, indicating that H32 was supported. However, since paths referring to H31, H51, and H52 were not significant, these three hypotheses were not supported. SEM analyses showed that the explained variance of DVO in terms of R square was 68.8% by the four independent predictors: Open to experience (OE), self-direction (SD), stimulation (S) and low power distance (LPD). The explained variance of SDA was 49.1% by the four independent predictors, as well as the mediator diversity value orientation (DVO), which partly mediates the relationship between LPD and sport diversity attitudes.

The reason why hypotheses (H51, H52) related to SD were not supported was possibly because SD was highly related to the other three independent predictors (Table 3), although their discriminant validity was met. Nevertheless, the two correlation coefficients between SD and DVO (0.602) and between SD and SDA (0.522) (Table 3) were significant and high. From this aspect of the analysis, H51 and H52 were supported. Without SD in the model, another analysis of SEM showed that all hypotheses from H1 to H4 were supported with only H42 supported indirectly through DVO. In addition, comparison of the models among the three countries showed that the model was more powerful for the VN group than the USA and TW groups. The explained variance of DVO was 83.7% in the VN group, 51.3% in the TW group, and 35.4% in the USA group. In both of the VN and TW groups, LPD and S were the predictors of DVO, while for the USA group, only LPD was the predictor. The explained variance of SPD was 61.4% in the VN group, 45.5% in the TW group, and 19.4% in the USA group. In the TW group, LPD was the predictor of SDA. While in the USA group, S was the predictor.

Regression analyses

Table 4. **RESULTS OF REGRESSION ANALYSES**

	Total		**US**		**TW**		**VN**	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Dependent variable	DVO	SDA	DVO	SDA	DVO	SDA	DVO	SDA
Independent variable								
LPD	0.488	0.193	0.177	n.s.	0.316	n.s.	0.544	0.309
OE	n.s.	0.114	0.288	n.s.	n.s.	n.s.	n.s.	n.s.
S	0.203	0.117	n.s.	0.281	0.245	n.s.	0.228	n.s.
SD	0.110	n.s.	n.s.	n.s.	n.s.	0.267	n.s.	n.s.
DVO	NA	0.246	NA	n.s.	NA	0.231	NA	0.361
R^2	0.540	0.400	0.164	0.117	0.369	0.316	0.693	0.509
F	182.477	83.430	7.915	4.727	22.028	14.296	188.397	69.813

NA = Not Available n.s.=not significant TW=Taiwan VN-Vietnam

DVO = Diversity value orientation; LPD = low power distance; OE = Open to experience;

S = stimulation; SD = self-direction; SDA = sport diversity attitudes.

All numbers for independent variables were standardised regression coefficients with $p<0.05$.

Regression analyses were further conducted to provide some information for reference. The general analyses in All-Model 1 and All-Model 2 showed that the results were very similar as those from SEM except that the standardised regression coefficient from SD to DVO was significant (0.11, $p<0.05$) (Table 4) to directly support H51 and indirectly support H52. In the US, TW and VN regression models, results were somehow different from those of SEM. In the US group, OE and LPD were the predictors of DVO, indicating H21 and H31 were supported in the US-Model 1 (Table 4). For the dependent variable SDA, SD and DVO were predictors in the TW-Model 2, while LPD and DVO were predictors in the VN-Model 2, indicating that H1, H22 and H52 were supported. All hypotheses were supported at least in some regression model (either in the overall models or in one of the three countries' models). For example, the regression coefficient of OE was not significant in the All-Model 1 but was significant (0.288, $p<0.05$) in the US-Model 1 (Table 4).

CONCLUSION

This study introduces a new definition of "diversity in sport" at schools as levels of variety in resources or opportunities for students to participate or watch in terms of different types of sports, which is far from the commonly-known one as similar levels of sport participation opportunities given to people from ethnically, culturally, and linguistically diverse backgrounds. The research also provides evidence that personality traits, personal values and perceived cultural values influenced diversity value orientation (DVO), and then further impacted students' attitudes toward sport provision diversity for college sport lifestyles.

The value of the investigation of this study is to emphasise that from a self-fulfilment standpoint, a concern was not only opportunities for sport participation in terms of frequency and time, but also the richness in diverse sport types for people to have more choices of their favourite sports. Individuals who tend to be more curious about new things, seek new stimulation and be more equal with various interest pursuits in different sports, would be more associated with diversity value orientation and attitudes toward sport provision diversity. Thus, diverse benefits derived from many different sports would earn more attention.

This study concluded that the USA group seemed to be higher in OE, S and SD and stronger sport diversity attitudes. The VN group fitted the sport diversity model better. A level of sport provision diversity might be considered as an index of a country's development and paralleled with other economic and social development indicators. Nevertheless, different values and cultural background might be considered, when using sport provision diversity as a tool in advancing development priorities.

RECOMMENDATIONS

The sport diversity attitude model in this study contributed by providing useful descriptive information about sport diversity for sport managers', policy makers' and educators' reference in the three countries are totally different from ethnically, culturally and linguistically diverse backgrounds. By studying abroad programmes, American students may travel to Vietnam and Taiwan or vice versa and experience not only different culture, but also new sport to increase their sport diversity. Additionally, when providing support for international students to access new sport resources, universities need to be aware students' personal values, personality as

well as cultural background, and then can adopt a more adequate approach to assist the sport activities for international students.

From a global perspective, universities can develop partnerships through sport management education by introducing new sport, background, resources to exchanging international students and visiting scholars. Universities may encourage diversity culture through sport management education, and assist their students to choose and maintain a positive attitude to sport provision diversity. The positive attitude can help university students to deal effectively with different sport people and situations in various ways. This also helps university students to learn and understand different types of sport. Positive sport provision diversity attitudes can create a good influence on college students' sport diversity lifestyles.

Future research could examine whether different years in colleges and gender may influence the attitudes toward sport provision diversity and the model. Additionally, the reasons for the decrease in power distance in the VN group may require further research. The lack of consistence between the findings of the present study and Hofstede's data in power distance could also be examined further. Perhaps colleges are one of the organisations that are considered to create their own cultures and affected by changes in environmental factors, but organisational culture may not completely represent social values. Also, further research could focus on explaining why LPD was the major predictor in the model for the VN group. It is also expected that future research can utilise this model in other countries to confirm the validity of the model. Another future study is to examine whether it is reasonable to parallel sport provision diversity with economic and social development indicators.

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