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INTENTIONS OF CHINESE PRESERVICE PHYSICAL EDUCATORS TOWARD TEACHING STUDENTS WITH DISABILITIES

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DISSERTATION THESIS

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Declaration of Originality

I, Li Yun (student number 80062090) declare that this dissertation entitled "Intentions of Chinese Preservice Physical Educators toward Teaching Students with Disabilities" and submitted as partial requirement for Ph.D. postgradual study program of Special Education is my original work and that all the sources in any form (e.g. ideas, figures, texts, tables, etc.) that I have used or quoted have been indicated and acknowledged in the text as well as in the list of reference.

Signature **Date**

ABSTRAKT

Záměry učitelů tělesné výchovy jednat určitým způsobem v rámci výuky žáků s postižením se týkají kvality vzdělávání těchto žáků. Jedná se o úzce zaměřené téma v oblasti inkluzivní tělesné výchovy, kterému prozatím v Číně není věnovaná dostatečná pozornost. Na pozadí rozvíjejícího se inkluzivního vzdělávání je však téma postojů obecně a záměrů jednání směrem k žákům s postižením nosné.

Cílem studie bylo zjistit záměry k jednání (dle Ajzenovi teorie plánovaného chování – TPB) budoucích učitelů tělesné výchovy v Číně k žákům s postižením, včetně aktuální situace, významných ovlivňujících faktorů a možností případné změny. Zároveň byla zkoumána použitelnost teorie plánovaného chování a dotazníku „Záměry učitelů tělesné výchovy v rámci výuky jedinců s postižením – III (PEITID-III)“ v čínském prostředí.

V této studii byl z důvodů pragmatismu využit postup smíšeného výzkumu a triangulační strategie včetně dotazníkového šetření, experimentálního výzkumu a polostrukturovaného rozhovoru. Data v rámci dotazníku (PEITID-III) byla získána od 2305 budoucích učitelů tělesné výchovy z 10 univerzit nacházejících se ve východní, střední a západní oblasti Číny. Data v rámci experimentálního výzkumu (Implicit Association Test, IAT) byla získána od 71 budoucích učitelů tělesné výchovy ze Southwest University. Data na základě polostrukturovaného rozhovoru byla získána od 14 budoucích učitelů tělesné výchovy ze Southwest University.

V rámci této studie bylo zjištěno, že záměry k jednání budoucích učitelů tělesné výchovy v Číně v rámci výuky žáků s postižením jsou v současnosti pozitivní, ale nereálné. Jednou z významných příčin je skutečnost, že nejsou dostatečně profesně připraveni na inkluzi, což vede ke snížení přesvědčení o jejich vlastním vlivu na výuku žáků s postižením. Další významnou příčinou je fakt, že mají předsudky o žácích s postižením, což vede ke snížení přesvědčení o jejich vlastním chování při výuce žáků s postižením. Tato studie experimentálně prokázala, že implicitní postoje (předsudky) budoucích učitelů tělesné výchovy k žákům s postižením se mohou změnit na pozitivní postoje prostřednictvím semestrálního (20 týdenního) kurzu aplikované tělesné výchovy. Co se týče jednotlivých atributů záměrů a uváděného chování

budoucích učitelů tělesné výchovy v Číně v rámci výuky žáků s postižením, významnými aspekty jsou ročník, region a profesní příprava, zatímco pohlaví a zkušenost s postižením nepředstavují signifikantní faktory.

V rámci této studie byla využita teorie plánovaného chování (dále TPB) (Ajzen) a dotazník PEITID-III (Rizzo). Záměry jednat určitým způsobem byly predikovány prostřednictvím všech přímých a nepřímých ukazatelů včetně chování, subjektivních norem, vědomé kontroly chování, přesvědčení o vlastním chování, normativního přesvědčení a přesvědčení o vlastním vlivu. V porovnání s modelem TPB dle Ajzena, model TPB použitý v této studii poskytl více predikčních způsobů. Přesvědčení o vlastním chování nepřímo predikuje záměry, kdy plným mediátorem je postoj k chování a také vědomá kontrola chování. Normativní přesvědčení nepřímo predikuje záměry, kdy částečným mediátorem jsou subjektivní normy a také postoj k chování. Přesvědčení o vlastním vlivu nepřímo predikuje záměry, kdy plným mediátorem je vědomá kontrola chování a také postoj k chování.

Výsledky této studie naznačují, že čínské univerzity by měly spolupracovat se základními školami a relevantními komunitami za účelem kultivace záměrů budoucích učitelů tělesné výchovy v rámci výuky studentů s postižením prostřednictvím jejich profesní přípravy zaměřené na inkluzi a působením na jejich implicitní postoje k žákům s postižením.

Klíčová slova: inkluzivní vzdělávání, budoucí učitelé tělesné výchovy, záměry k jednání, implicitní postoj, teorie plánovaného chování (TPB)

CONTENT

ABSTRACT

Intentions of physical educators toward teaching students with disabilities are related to the educational quality of students with disabilities. This is a focused theme in the area of inclusive physical education. But, it has not got the enough attention in China especially in the background of developing inclusive education.

This study was to investigate Chinese preservice physical educators' intention toward teaching students with disabilities including its current situation, influence factors, and the possibility to change. At the same time, the applicability of the Theory of Planned Behavior and the questionnaire named "Physical Educators' Intention toward Teaching Individuals with Disabilities – III (PEITID-III)" were examined in the background of China.

In this study, based on the philosophy of pragmatism, mixed research approaches and triangulation strategy including questionnaire survey, experimental research, and semi-structure interview were conducted. The data of questionnaire (PEITID-III) survey came from 2305 preservice physical educators in 10 universities located in Eastern, Central, and Western of China; the data of experimental research (Implicit Association Test, IAT) was collected from 71 preservice physical educators of Southwest University; and the data of semi-structure interview was got from 14 preservice physical educators in Southwest University.

This study explored that Chinese preservice physical educator's intention toward teaching students with disabilities was positive but unrealistic currently. One important reason was that they had not enough professional preparations for inclusive and this resulted in their lower control beliefs on teaching students with disabilities. Another important reason was that they had prejudice on students with disabilities and this resulted in their lower behavioral beliefs on teaching students with disabilities. The experimental research in this study proved that preservice physical educators' implicit attitude (prejudice) toward students with disabilities could be changed into positive attitude by mid-term (20-week) adapted physical education training program. For the attributes of Chinese preservice

physical educators' intention and self-reported behavior toward teaching students with disabilities, the effect of their grade, region, and professional preparations were significant, but the effect of their gender and contact experience with disabilities were not significant.

Ajzen's TPB and Rizzo's PEITID-III were suitable in this study. In the current study, intention was predicted by attitude toward the behavior, subjective norms, perceived behavioral control, behavioral beliefs, normative beliefs, and control beliefs. Compared with the TPB model of Ajzen, the TPB model in current study presented more prediction paths. Behavioral beliefs indirect predicted intention not only fully mediated by attitude toward the behavior but also fully mediated by perceived behavioral control. Normative beliefs indirect predicted intention not only partially mediated by subjective norms but also partially mediated by attitude toward the behavior. Control beliefs indirect predicted intention not only fully mediated by perceived behavioral control but also fully mediated by attitude toward the behavior.

This study suggested that Chinese universities should collaborate with primary and secondary schools, and communities to cultivate preservice physical educators' intention toward teaching students with disabilities by focusing on their professional preparations for inclusion and their implicit attitude toward students with disabilities. For departments of educational administration in all levels should provide the support on policies and environment for inclusive physical education.

Keywords: China, Inclusive Education, Preservice Physical Educator, Intention, Theory of Planned Behavior

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LIST OF ABBREVIATION

ADHD:	**Attention deficit hyperactivity disorder**
APA:	**Adapted Physical Activity**
APE:	**Adapted Physical Education**
IAT:	**Implicit Association Test**
IEP:	**Individual Education Plan**
IDEA:	**the Individuals with Disabilities Education Act**
LRC:	**Learning in Regular Classroom**
ME:	**Ministry of Education**
PE:	**Physical Education**
PEITID:	**Physical Educators' Intention toward Teaching Individuals with Disabilities**
PRC:	**People's Republic of China**
RED-R:	**Revised Regulation on the Education of the Disabled**
TPB:	**Theory of Planned Behavior**
UNESCO:	**United Nations Educational Scientific and Cultural Organization**
I:	**intention**
SRB:	**self-reported behavior**
ATB:	**attitude toward the behavior**
SN:	**subjective norm**
PBC:	**perceived behavioral control**

Chapter 1: Introduction

1.1 Statement of the research problem

The gradual transition in the education system from the medical deficit model to the social inclusion model in late 1970s contributed to the Salamanca Statement agreed by 92 countries and 25 international organizations in 1994. This Statement has ignited government initiation to adopt the principles of inclusive education, which emphasize "schools should accommodate all children regardless of their physical, intellectual, social, emotional, linguistic or other conditions" (UNESCO, 1994, p. 5). But, the concept of inclusive education, until now, has become not a disability-only issue but an educational quality issue, and highlights the core ideas that pedagogy is the key to meeting all students' educational needs by making the curriculum flexible and more accessible (Kumar, 2016). "Inclusive education has come to mean making equal educational opportunities accessible to all students, irrespective of their biological, physical, intellectual, psychological, cultural, and social conditions" (Mu, 2015). Today inclusive education has become an international movement and most students with disabilities are being educated in mainstream education (Rizzo, 2007).

The ideology of inclusive education was introduced to China when China was opened up to the world after the leader Deng Xiaoping initiated the open-door reform policy in the mid-1980s (Deng & Poon-McBrayer, 2012). "Learning in Regular Classroom (LRC)", as a key and practical approach of the idea of inclusive education, has accumulated rich experience in making accessible public schooling for children with disabilities (Deng & Manset, 2000). Most of the students with disabilities began to go to general school after the program of LRC was supported by a regulation which carried out according to the Compulsory Education Law (NPC, 1986), and the Law of People's Republic of China on the Protection of Persons with Disabilities (NPC, 1990) by Ministry of Education of People's Republic of China (ME, PRC) on 21st July in 1994. According to the statistic of ME (See Table 1.1), there were 270800 students with disabilities in school and 55.06% of them were in and attached to regular schools in mainland of China in 2016. In 2006, there

were 61.12% (221819) school students with disabilities in and attached to regular schools, and the number in 1999 was 68.93% (256148); however, in 1992, it's just only 28% (36260).

Table 1.1 The Number of Students with Disabilities of LRC

Year	ESD			LRC			LRC/ESD(%)		
	Total	**PS**	**JSS**	**Total**	**PS**	**JSS**	**Total**	**PS**	**JSS**
2016	**491700**			**270800**			**55.06%**		
2015	442000			239600			54.20%		
2014	394900			209100			52.94%		
2013	358108	259067	99041	190831	132658	58173	53.29%	51.21%	58.74%
2012	378751	268532	99768	199753	141990	57763	52.74%	52.88%	57.90%
2011	388855	276803	112052	225233	154846	70387	57.92%	55.94%	62.82%
2010	415992	300798	115194	259601	184269	75332	62.41%	61.26%	65.40%
2009	419459	303962	115497	269163	192123	77040	64.17%	63.21%	66.70%
2008	409561	301941	107620	264102	193418	70684	64.48%	64.06%	65.68%
2007	412183	310478	101705	272050	205247	66803	66.00%	66.11%	65.68%
2006	**362946**	279406	83540	**221819**	176705	45114	**61.12%**	63.24%	54.00%
2005	364409	284572	79837	230047	186529	43518	63.13%	65.55%	54.51%
2004	371813	290102	81711	242970	195316	47654	65.35%	67.33%	58.32%
2003	364740	286360	78380	241571	195418	46153	66.23%	68.24%	58.88%
2002	374457	298266	76191	255710	208479	47231	68.29%	69.90%	61.99%
2001	386360	322224	64136	276195	236637	39558	71.49%	73.44%	61.68%
2000	377599	337478	40121	259882	233135	26747	68.82%	69.08%	66.67%
1999	**371625**	336651	34974	**256148**	233196	22952	**68.93%**	69.27%	65.63%
1992	**129500**			**36260**			**28.00%**		

ESD=Enrollment Students with Disabilities; LRC=Learning in Regular Classroom; PS=Primary School; JSS=Junior Secondary School. Data was Retrieved from http://old.moe.gov.cn/publicfiles/business/htmlfiles/moe/s8493/index.html

Therefore, the concept of inclusive education is now becoming more and more popular and acceptable than twenty years ago in China (L. J. Lieberman, Brian, & Grenier, 2017). "Physical education is distinguished from other curricular areas by its primary focus on the body and on physical experience and is an integral part of the educational process, without which the education of the child is incomplete" (Bunscoile, 1999, p. 2). Physical education

class seems to be an interesting context for inclusion (Tant & Watelain, 2016). "Participation for students is an essential prerequisite to learning in physical education. Schools should facilitate, as far as possible, the inclusion of students with disabilities in all physical education activities (the National Council for Curriculum and Assessment in Ireland NCCA, 2003)" (Rizzo, 2007). As a part of inclusive education, inclusive physical education has already developed into a worldwide popular term connected with the justice, dignity and equality of human being based on the definitions of *Modified physical education* (MPE) (Conolly, 1955; Foote, 1945; Loeffel, 1950), *Adapted physical activity* (APA) (Broadhead, 1990; IFAPA, 2016; Sherrill, 1976; Sherrill & DePauw, 1997), *Adapted physical education* (APE) (Auxter, Pyfer, Zittel, & Roth, 2009; Churton, 1986; Dye, 1976; Kelly, 1995) and *Special Physical Education* (SPE) (Dunn, 1997; Fait, 1966; Jansma & French, 1994).

With the development of inclusive education in China during the past three decades, LRC has already become a common phenomenon and this situation requests general schools to set up inclusive physical education to meet the needs of students with disabilities. Many researchers have reported relevant demands in general school of China (R. Chen, 2007; Shihui Chen & Gao, 2003; Shu Chen, Luo, & Huang, 2012; Liang, Ma, & Jia, 2010; Jian Wang & Cao, 2014; Yin & Chen, 2013). But there is a big challenge that confronts inclusive physical education in mainland China, such as lacking of a large number of qualified adapted physical teachers, and adapted physical education programming are not well prepared (Chunxiao Li & Sam, 2011). Despite receiving different forms of support, the school teachers expressed that it did not adequately address to the challenges they face when teaching inclusive class of learners (Xu & Malinen, 2015). In the first decade of 21st century, there were some voices to advocate that training special physical educators in the major of physical education in universities (M. Jin, Sun, & Chen, 2006; Jianxin Wang & Chen, 2006; F. Zhang & Sun, 2004). But there are just only 7 universities recruiting undergraduate students in major of special physical education in China and most of the graduate students work in special school. Because of the examination system still putting more emphasis on literacy course than physical education curriculum, China had not set up teacher training programs about inclusive physical education for preservice and inservice

physical educators until 2016. This means, in China that the general physical educators with inclusive skills and knowledge are seriously in adequate. But this situation will be changed in the future with the government of China beginning to put more attention on the health and the education of the disabled.

China issued a revised Regulation on the Education of the Disabled (RED-R) at the beginning of 2017. The regulation stipulates that during compulsory education, disabled students in normal schools should be taught by teachers with experience in special education (Chapter 2, RED-R). In order to promote the development of inclusive education in China, this regulation emphasizes on the training of general teacher's inclusive education abilities, and requests that "normal universities and comprehensive universities with a discipline of teacher education should set up inclusive education courses, so that preservice teachers have the basic knowledge and skills of inclusive education to meet the needs of the students with disabilities in general school" (Chapter 6, RED-R). Hence, in the future, the major of physical education in universities of China will revise the training program and set up new courses related to inclusive education and inclusive physical education in order to training qualified general physical educators with skills and knowledge of inclusive education for general school. Accordingly, pre-service physical educator's intentions toward students with disabilities and abilities of inclusive education will become the focus of training institutions.

Intentions toward students with disabilities has been proposed as a core quality of inclusive educators (Pijl & Meijer, 1997; C. Sherrill, 2004), because these intentions have an impact on the educational process and the development of students with disabilities (Cheen, 2008; Heikinaro-Johansson & Sherrill, 1994). Preservice physical educators as physical educators in the future, whose intentions toward students with disabilities will have an important influence on the effective teaching of inclusive.

Will the preservice physical educators want to teach students with disabilities in his (her) regular classroom in the future? According to the Theory of Planned Behavior, actions are influenced by intentions (Ajzen, 1985). The physical educator's intention, especially attitude, toward students with disabilities have been an area of argue for many scholars

(Block & Rizzo, 1995a; Columna et al., 2016; Danermark, 2010; Doulkeridou et al., 2010; Hodge, 1998; Rizzo, 1985b; Rizzo & Wright, 1988b; Simons & Kalogeropoulos, 2005b) based on the Theory of Reasoned Action (Ajzen & Fishbein, 1980) and the Theory of Planned Behavior (Ajzen, 1985, 1991, 2001). In the past decades, with the more and more emphasis on the quality of preservice physical educators in many countries, the preservice physical educator's intention gradually became an important topic among international physical education researchers (Duchane, Leung, & Coulter-Kern, 2008; Folsom-Meek, Nearing, & Krampf, 1995a, 1995b; Hodge, 1998; James, Collier, & Brusseau, 2015; Kudláček, 2007; Martin & Kudláček, 2010; Nolan, Duncan, & Hatton, 2000; Oh et al., 2010; James Schoffstall & Ackerman, 2007; Sofo, Ramos, & Beard, 2016).

In recent years, some researchers in HongKong, Taiwan and Mainland of China have begun to focus on the inservice physical educator's intention toward inclusion of students with disabilities (Chunxiao Li, Chen, & Tsoi, 2012; B. Liu, 2011; Y. Liu, Wang, Tao, & Kudláček, 2012). However, few scholars have researched the preservice physical educator's intention toward inclusion of students with disabilities (Y. Liu et al., 2012). From May of 2017, China began to carry out the RED-R. More and more normal universities and comprehensive universities will begin to foster preservice physical educators with the background of inclusion education. Therefore, we should pay more attention to preservice physical educators' intention for the development of inclusive physical education in China.

In the current study, we will investigate the current situation of preservice physical educators' intentions toward students with disabilities in China, exploring the factors that may enhance these intentions, and exploring the possibilities of enhancing these intentions by a mid-term inclusive physical education training program.

1.2 Research background

With inclusive physical education environment increasingly needed in China, what the situations of preservice physical educators' intention toward students with disabilities are? This problem is rooted in three progressive considerations. Firstly, the physical education (PE) teachers with competence, knowledge, and skills about special physical education are

far not satisfying the current demand for the development of inclusive physical education in China (H. Pan, Zhang, Wang, & Tang, 2016). Secondly, institutions of physical education in universities of China should set up inclusive education programs and courses for preservice physical educators in order not only to respond the call of RED-R but also to adapt to the development trend of inclusive education all over the world and train qualified physical educators with inclusive education for elementary and secondary schools. Thirdly, intentions of preservice physical educators toward teaching students with disabilities can predict their pedagogical behaviors in future according to the Theory of Planned Behavior (TPB). So, their intentions toward students with disabilities should be studied in order to carry on related inclusive physical education curriculums better and to cultivate them having intentions to teach students with disabilities in their regular physical education classes in the future.

1.2.1 The shortage of inclusive physical educators in China

Currently in China, the shortage of inclusive physical educators is not only on the quantity but also on the quality.

Regarding the quantity issue, the current amount of inclusive preservice physical educators cannot meet the demands in reality. Although we cannot know the detail number of inclusive physical educators, we know it is pretty small (See Table 1.1). Just let alone the number of inclusive physical educators. In fact, Schools of China including primary school and secondary school are very short of general physical educators. Take the year of 2013 in China as an example, each school has an average of 1.87 physical educators, but nearly every 310 students only have one physical educator (See Table 1.2). However, almost all general physical educators have not the educational background of inclusive education. Most of physical educators cannot provide the Individual Education Plan (IEP) for students with disabilities in their general PE class (Hao & Lu, 2009). Yao (2004) stated that very few ordinary schools provide special physical education for students with disabilities, and most of them self-learning in classroom instead during the PE class time, because of safety consideration and no equipped PE teachers for them. Ten years later, this phenomenon is still confirmed by Y. Liu, Tong, and Zhu (2014), they surveyed pupils' attitude toward

including students with disability in physical education and found that, basically, students with disability were segregated in PE class.

Table 1. 2: The Number of Physical Educators in Primary and Secondary Schools of China

Year	NS				AES				PE				PE / NS				AES / PE			
	Total	PS	JSS	SSS	Total	PS	JSS	SSS	Total	PS	JSS	SSS	Total	PS	JSS	SSS	Total	PS	JSS	SSS
2013	279685	213529	52804	13352	162365552	93605487	44401248	24358817	524123	263827	181900	78396	1.87	1.23	3.45	5.87	**309.79**	354.80	244.10	310.72

NS=Number of School; PS=Primary School; JSS=Junior Secondary School; SSS=Senior Secondary School; AES=All Enrollment Students; ESD=Enrollment Students with Disabilities; LRC=Learning in Regular Classroom. Data was Retrieved from http://old.moe.gov.cn/publicfiles/business/htmlfiles/moe/s8493/index.html

In Western countries, the inclusive physical education aims at disabled students with various degrees of disability, including mild disability, modernity disability, and severe disability, and there are different staffs taking support for their sports participation, such as general physical education teacher, adapted physical education teacher, specialist, peers support, and even doctor. But in China, just very few physical educators can take support for disabled students' sports participation at present (See Table 1.3), and even "no training has been provided for PE teachers" (L. Wang, Qi, & Wang, 2015). This situation is caused by the special physical educator training system. As the following Table 1.3 shown, there are only a few of special physical educator training programs in universities of China currently (Sang, 2016; Xie, 2011), and almost all of them will go to general schools not to be inclusive physical educators in general school when they graduated. Most of general PE teachers are self-educated for teaching students with disabilities (Sang, 2016).

On the aspect of quality, China still has not real inclusive physical educators. Inclusion in PE is very challenging and there are more critical problems for PE teachers (Klavina, Jerlinder, Kristén, Hammar, & Soulie, 2014). Including students with disabilities in general schools start emerged from 1970s (J. Jin, Yun, & Wegis, 2013; Kudláček, 2007; Y. Liu & Zhang, 2015; Norwich, 2013; Terzi, 2008). But in China, the inclusive physical education environment has not formed, although *Suiban Jiudu* (LRC) has been ideological and

pragmatic rooted in general schools since 1980s.

Table 1.3: Universities Have Special Physical Education Training Program

University	Year since	Specialty	Diplomas
Tianjin Institute of Physical Education	2001	Special education	Undergraduate
Shandong Institute of Physical Education	2004	Special physical education	Undergraduate
Xi'an Institute of Physical Education	2006	Sports rehabilitation	Undergraduate
Liaoning Normal University	2006	Special physical education	Undergraduate
Guangzhou Institute of Physical Education	2008	Special education	Undergraduate
Quanzhou Normal University	2009	Special physical education	Undergraduate
Wuhan Institute of Physical Education	2013	Special physical education	Undergraduate

Many students with disabilities have not fully participated in PE class in general schools and they are simply placed into general PE class without support and no related flexible learning contents(Liang et al., 2010). F. Pan (2013) investigated the attitude of physical education teacher toward students with disabilities participating physical education class in universities of Tai'an city, and he found that 50% of PE teachers let students with disabilities just look, 20.83% of PE teachers gave them the exemption of the course, 29.17% of teachers let them make a choice by themselves, and no PE teachers arranged recovery activity for students with disabilities in the class of physical education. Students with disabilities did not participate in PE class because of their PE teachers' lack of ability to teach them properly (X. Li, 2014). Hao and Lu (2009) investigated physical education teachers of students learning in regular classes in the primary schools in 18 districts of Beijing, the results showed that 96.5% of 342 participants answered that the students with disabilities participate general PE class while 83.3% participants arranged them rest nearby, and wherever PE teachers in urban areas or suburb areas, a great number of PE teachers cannot take correct instructional strategy in teaching students with disabilities although most of the students learning in regular classes, and a few PE teachers consider the

individual differences and have intention to teach them. This situation that students with disabilities are "dumped" into the regular classroom without the help they need to succeed is very serious, and part of problems is caused by the lack of positive intentions and attitudes of physical educators toward teaching students with disabilities. Many problems lie in the participation status quo of students with sport disadvantaged in PE class. China is very lack of physical educators with special educational background. 67.1% of 342 participants think they have difficulties in teaching students with disabilities in general PE class, such as taking too much time for individual coaching, difficult to communicate, no special policy support, no professional training for teachers, and difficult to look after them in class (Hao & Lu, 2009).

1.2.2 The needs of inclusive education training for preservice physical educators

In order to deal with the problem of lacking inclusive physical educators, many developed countries had begun to add adapted physical education training to general preservice physical educators. For instance, Oh et al. (2010) reported many university undergraduate teacher preparation programs in the United State are offered a course in adapted physical education (Oh et al., 2010). In Europe, one way to solve the ongoing tensions of lacking inclusive physical educators is to add adapted physical education training to general physical education student teachers (Kudláček, Ješina, & Flannagan, 2010). In Australia, some researchers suggest that a more comprehensive preservice PE teacher training program is warranted in Australian universities (Pedersen, Cooley, & Hernandez, 2014).

Constantly suggestions of inclusive education training for preservice physical educators were made by many scholars in China, too. Many of them suggested that the institute of physical education and universities in China should establish the major of special education to foster the future special educators by developing the construction of teachers, aspects of teaching practice, and curriculums to meet the needs of people with disabilities for physical education (M. Jin et al., 2006; X. Li, 2014; Nie & Xiao, 2010; Jianxin Wang & Chen, 2006; F. Zhang & Sun, 2004; Zhuang & Liu, 2005). Since 2001, seven universities have established the major of special physical education (See Table 1.3). But, there are many problems during the process of training program for special physical education, such as too

few universities setting up this major, curriculum failing to meet the specialization in the major, and the weak awareness of teachers of specialization, et al. (Xie, 2011). So, it is not enough to foster special physical educators only in several universities under the current situation of development of inclusive education in China.

Universities in China need to reconstruct the physical education curriculum system based on the concept of inclusive education in order to foster physical educators who can adapt to general physical education and inclusive physical education in the future. By investigating the physical education curriculum system in universities of China, Shu Chen, Ou, Pan, and Xie (2015) argue that no courses related to physical education for students with disabilities were offered, which means that it is hard for preservice physical educators to enjoy the right of sports and to ensure fair education for every student in their future physical education classes. Cao, Liu, Zeng, and Wang (2012) pointed that the lack of quantity and quality of adapted physical educators fostered by universities has affected the development of the specialization of adapted physical education in China, and should increase the enrollment and more and more institutions to set up the program of adapted physical education. Yu and Zeng (2017) stated that universities in China should integrate the idea of inclusive education into the general education system by carrying out related policies.

Supports from government are very important for the development of inclusive education. The education of students with special needs has been paid specific attention since the Salamanca Statement and Framework for Action (Appendix B) (UNESCO, 1994) was announced. And the movement from special education towards inclusive education has been prompted (Overton, Wrench, & Garrett, 2016). The inclusive education had been carried out generally in America and Europe. China should develop inclusive education vigorously according to the needs of the whole society.

In fact, Chinese government had made great efforts to improve the development of inclusive education in recent years. 9 policies had been carried out by Chinese Central government to support the development of special educators since 1980s (See Table 1.4). Seven departments developed two issue joint polices called “Special Education Promotion Plan (2014-2016)” and “Special Education Promotion Plan (2017-2020)” carried out

successively on January 8 of 2014 and July 17 of 2017. With the RED-R carried out on February 23 of 2017, all of these policies aim to improve the development of special education and guarantee the right of people with disabilities to education. In order to provide enough teachers for the development of special education, these policies especially emphasize on the value of normal universities and comprehensive universities on cultivating inclusive educators, and request to set up inclusive courses and training programs in related teacher education majors of those universities. The request for the inclusive education training of preservice educators in policies that carried out by Chinese government during the past 20 years, identified the issue that fostering inclusive educators in normal universities and comprehensive universities had become tasks of related department of Chinese government as an important decision, although "these policies' mandatory, concreteness and operability is not good enough"(Feng, 2017).

Obviously, the needs of inclusive education training programs for preservice educators not only come from the reality of serious shortage of inclusive physical educators in primary and secondary schools, but also was responded by appeals of many researchers, and even just got the support of Chinese government policies.

Table 1.4: Policies Supporting Inclusive Education Training of Preservice Educators in China

Time of Carried Out	Title of the Policy	Supporting Contents
04-05-1989	Some Opinions on the Development of Special Education	Article 18: Establish the major of Special Education in some general normal universities.
21-07-1994	Trial Implementation of Learning in Regular Classroom of Disabled Children	Article 21: Secondary normal schools should set up special courses by stages.
27-11-2001	Opinions on Further Promoting the Reform and Development of Special Education during the 15th Five Year Plan	Article 11: Encourage and support some qualified general normal universities to establish the major of Special Education. Normal universities should set up special courses or workshops, and popularize knowledge of special education in students.
24-04-2008	Law of the People's Republic of China on the Protection of the	Article 28: Fostering and training special educators in normal universities; normal universities set up special education courses

	Disabled	and let general educators have the knowledge of special education.
07-05-2009	Opinions on Further Speed Up the Development of Special Education	Article 16: Encourage and support some qualified general normal universities to establish the major of Special Education or set up special education courses. Intensify the training of special education or related majors of graduated students.
08-11-2012	Opinions on Strengthening the Construction of Special Education Teachers	Article 2: Support normal universities and other universities set up special education courses in the major of teacher education.
08-01-2014	Special Education Promotion Plan (2014-2016)	Article 5: Encourage local government select qualified universities to establish the major of special education. Encourage universities set up special education courses in the major of teacher education.
01-02-2017	Regulation on the Education of the Disabled	Article 44: Encourage normal and comprehensive universities establish the major of special education and set up special education courses in the major of teacher education.
17-07-2017	Special Education Promotion Plan (2017-2020)	Article 5 in Chapter 3: Encourage enlarge enrollment of the major of special education in universities. Increase the training of master degree and doctoral degree in special education. Generally set up special education courses in the major of teacher education in universities.

1.2.3 A call for study Chinese preservice physical educator's intention for inclusion

The development and spread of inclusive education idea in the global wide embodies the progress of the whole human education and the expansion of social justice. Inclusive physical education, as a part of inclusive education, plays a key role in promoting the education equality and achieving social justice. Currently, with the development of social economy, the government is promoting the rapid development of education for the individuals with disabilities and the inclusive education. Based on the need of education equity and sports for all, the practice of China's inclusive physical education is beginning with the LRC system in the 1980s. However, due to the neglect of adapted physical

education training and limited of the number of special PE teacher, China's inclusive physical education developed slowly. The new revised Regulations on Education for the Disabled (RED-R) and Special Education Promotion Plan (2017-2020) of China suggests that normal universities and comprehensive universities with a discipline of teacher education should set special education courses. This will break the bottleneck of special PE teacher training. This means that preservice physical educators in universities must prepare their professional knowledge, skills and abilities to work with diverse students. In university physical education teacher education programs of many Western countries have already began this kind of preparation (Block & Obrusnikova, 2007; Kudláček et al., 2010; C. Sherrill, 2004). China is just on its initial stage on this issue.

In order to construct a safe, effective, and harmony general physical education class, we need to examine preservice physical educators' intention to teach students with disabilities, because they have the potential to provide information about teaching students with disabilities in PE classes. Actions is controlled by intention, but there are so many factors "that induce people to change their intentions, or prevent successful execution of the behavior"(Ajzen, 1985). Many researchers have studied behavioral intentions in the field of education for a better understanding of their teaching behaviors (Batsiou, Bebetsos, Panteli, & Antoniou, 2008; M Jeong & Block, 2011; Y. Liu et al., 2012; Rizzo, So, & Tripp, 2007; Valtonen et al., 2015). Preservice physical educators' intention toward students with disabilities is affected by many variables. According to the TPB theory, individual's intention to perform a behavior can be predicted by their attitudes, subjective norms, and perceived behavioral control. Also, demographic variables have been considered in literature.

Heikinaro-Johansson and Sherrill (1994) stressed attitudes are the biggest problem when implementing integration in physical education classroom, and pointed out that the starting point is teachers' positive attitudes. Many researchers have used TPB to study preservice teachers' attitudes toward individuals with disabilities (Di Nardo, Kudláček, Tafuri, & Sklenaříková, 2014; Martin & Kudláček, 2010). The results of these studies have suggested that attitudes are especially important determinants of behavioral intentions. Despite of this,

mixed results have been reported in literature regarding preservice physical educators' attitudes toward teaching students with disabilities. For example, Depauw and Karp (1990) reported that preservice physical educators held negative attitudes toward teaching individuals with disabilities in GPE. In contrast, Stewart (1991) reported that preservice physical educators showed favorable attitudes toward individuals with disabilities. In fact, there are many variables, such as social discrimination against students with disabilities, experience of living with individuals with disabilities, influence on preservice educators' attitudes toward individuals with disabilities. Folsom-Meek et al. (1995b) compared US preservice physical educators' attitudes toward teaching students classified as behaviorally disordered (BD), mildly mentally retarded (MiMR), and learning disabled (LD), and found that favorable attitudes, in descending order, among the participants (N=1081) were LD, MiMR, and BD. In this study, we will study the factors that will influence Chinese preservice educators' intentions toward individuals with disabilities, along with the psychological mechanism via which this occurs.

Since very few sport universities had added special physical education curriculums to physical education teacher education programs, so far as we know, no studies have been conducted to examine the effect in physical education teacher education of students with disabilities in China. Consequently, we need to know whether preservice educators actually intend or do not intend to teach students with disabilities in their PE class in China. The aim of universities, as training department, is to foster preservice physical educator having intentions or positive attitudes to teach students with disabilities in his (her) regular PE classes.

1.3 Purposes of the study

There are three purposes of this study. Firstly, I will investigate Chinese preservice physical educators' intention toward teaching individuals with disabilities by the instrument of Physical Educators' Intention toward Teaching Individuals with Disabilities: PEITID-III (based on the Theory of Planned Behavior: TPB), and to reveal the factors that may influence their intention, from a perspective of TPB theory. Also I would like to know if their intentions can be improved by inclusive physical education program (mid-term

adapted physical education training program).

Secondly, on the view of inclusive education, this study aims to deepen the understanding on the concept of educational equity, the idea of inclusive physical education, and the role of physical educator. The development of inclusive physical education in China is just on its beginning although China got brilliant achievements on Olympic Games and Paralympic Games. There are still great number of children who cannot share and enjoy physical activities because of the shortage of physical educators and the incompetence of them in the inclusive education context. So, we should spread the idea of educational equality, inclusive education by diversified approaches, such as academic research.

Thirdly, in methodology, this study intends to verify the applicability of the Theory of Planned Behavior (TPB) and the instrument of Physical Educators' Intention toward Teaching Individuals with Disabilities (PEITID-III). The Theory of Planned Behavior predict intentions and behavior quite well, and as one of the most frequently cited and influential models has been widely recognized for predicting human social behavior since introduced in 1985 (Ajzen, 2011). According to the TPB, Tripp and Rizzo (2006) developed an instrument called Physical Educators' Intention toward Teaching Individuals with Disabilities (PEITID) based on Physical Educators' Attitudes toward Teaching Individuals with Disabilities-III (PAITID-III). Rizzo et al. (2007) developed its new version: Physical Educators' Intention toward Teaching Individuals with Disabilities: II-Preservice Survey (PEITID-II-PS). This version was well used by some researches in different countries recent years (Ellis, Lepore, & Liberman, 2012; Oh et al., 2010; Su, Yun, & 소호성, 2007). PEITID-III is a reversion of PEITID-II-PS and this study will use the new one to assess the efficacy of the TPB on both training experience and no training experience groups.

1.4 Significance of the study

The practical significance of this study are: (1) can discover the intention level of current Chinese PE student teachers' toward teaching students with special needs, what the problem is and its causes, thereby provide important quantitative support for the upcoming reform of China's PE general education; (2) by exploring the effectiveness of teaching experiments, so as to provide targeted recommendations to China education departments about how to

improve the PE student teachers' intention level toward teaching students with disabilities, then to improve PE student teachers' knowledge and capacity structure under the background of inclusive education, and thus promote the inclusive physical education environment in the future of primary and secondary schools.

The theoretical significance of this study is: (1) it belongs to the important exploration of the cultivation way about the inclusive PE teacher training, and it is also the further practice of the international inclusive education idea in China, which is of great significance to the popularization of the inclusive education idea; (2) In recent years, the instrument PEITID-III has been widely used in the West. This study will apply it in China and examine whether it is suitable in context of China. On the one hand to expand its scope of application and influence, on the other hand for the East and West researchers to carry out comparative study on the relevant theme.

1.5 Theoretical framework

This study was guided by the philosophy of normalization, education equality, and the Theory of Planned Behavior. The idea of normalization and educational equality were adopted to supervise the identification of research topic, the rectification of viewpoints, and the value orientation during the process of research. The Theory of Planned Behavior was selected to conduct the survey instrument and direct the data analysis and discussion.

1.5.1 The philosophy of normalization

Education is an open-ended process, "not only to reflect social values, but also to develop rationality, and avoid irrational and hence repressive social influences"(Zitinski, 2005). In this process, all children should be treated with respect and as persons, and educator is educated "through his openness to the (moral) demand of his pupils"(White, 1994).

Inclusion is a way of providing a normalized educational experience for all children with disabilities (Scheffel, Kallam, Smith, & Hoernicke, 1996). Normalization, a philosophy of originated in Scandinavian and Canada, claimed that all individuals with disabilities should be provided the opportunity to live as normally as possible in daily society and be full

participants in social, educational, and vocational settings (Wolfensberger, 1972). For every Child, normalization requires "not a segregated preschool or regular school setting, but a continuum of highly demanding, progressively integrated developmental settings to individualize each child's needs and emphasize the most powerful teaching-learning relation—peer modeling" (Bronston, 1974, p. 515). The legislation IDEA (The Individuals with Disabilities Education Act of 1990) developed the concept of "the least restrictive environment" to emphasize the placement of students with disabilities within the most normalized version of the regular education setting that the student is able to experience success and to do this to the greatest extent possible (Scheffel et al., 1996). So, the philosophy of normalization and the concept of the least restrictive environment constructed the theoretical framework for the movement toward an inclusive educational system.

Inclusive physical education is essentially a service to students with disability, as "all teachers of physical education know, one of the main ingredients of an individual's healthy lifestyle is exercise" (Recreation, 1994, p. 5). So the goal of physical education programs is to include all students.

1.5.2 Education equality

Education equality is the cornerstone of social equity, which is concerned about not only enrollment opportunities equality but also the equity in the students' educated process, such as specifically attention to students with disability receive the appropriate education, attention to students with disability whether equitable sharing of the resources of education, concern about students' academic as well as whether other acts get equity evaluation. The concept of educational equity has a long history. 2000 years ago, Confucius put forward an idea of *Youjiaowulei* (有教无类) means provide education for all without distinction between classes of man. The ideal of educational equality is basically grounded in social and institutional arrangements designed to give equal consideration to all. Therefore, educational institutions should enact the value of equal concern by ensuring that all students no matter with or without disability have a fair share of educational goods and fair access to enjoying the benefits (Terzi, 2008). Terzi (2008, p. 145) argued that a conception of equality

in education would need to articulate three interrelated normative dimensions: these dimensions of educational equality cannot be identified independently; to determine exactly the kind of equality should be seeked to achieve; and to determine the principles that regulate the distribution of educational goods, and justify what inequalities are permissible. However, while there is general agreement on addressing the inequalities caused by society, and hence resulting from individuals' circumstances, such as socio-economic and cultural backgrounds as well as gender and ethnicity, the equalization of so-called 'natural' differences is instead more controversial. Inclusive education embodies the concept of educational equality which including equal opportunities of accessing school, receiving education and achieving academic success (S. Wang & Tian, 2016). In China, the current situation is not optimistic and far from the expected state.

1.5.3 The Theory of Planned Behavior

Among many behaviorist theories what attempted to explain the reasons behind alternation in individual behavior, some have been applied widely such as Ajzen's *Theory of Planned Behavior* (TPB). There are two reasons why Ajzen's (1991) TPB served as the theoretical basis of this study. Firstly, TPB suggests that behavior intention and perceived behavior control are determinants of behavior, and it is a theory links individual's attitude, intentions and behaviors. In this study, we will examine whether preservice physical educators can have positive attitude toward teaching students with disabilities after adding mid-term adapted physical education training program. Secondly, TPB has been widely used in educational research to predict individuals' behavioral intention and behavior (Jones, 2009; Leeuw, Valois, Ajzen, & Schmidt, 2015; Shafieinia, Hidarnia, Kazemnejad, & Rajabi, 2016).

The TPB is an extension of the theory of reasoned action (Ajzen & Fishbein, 1980) and has mainly focused on the prediction of intentions to perform a behavior, which measures the effect of individuals' beliefs, normative beliefs, and control beliefs that have on their intentions. By direct measure attitudes, subjective norm, and perceived behavioral control, the Theory of Planned Behavior measures individuals' intentions to perform a behavior. In addition, demographic variables also can influence on the relationships within the Theory

of Planned Behavior. Ajzen (2011) stated that "Behavioral, normative and control beliefs as well as attitudes, subjective norms and perceptions of behavioral control are assumed to feed into and explain behavioral intentions". The basic items of information are in the form of beliefs in the Theory of Planned Behavior. Behavioral beliefs are assumed to determine attitudes toward the behavior; normative beliefs are assumed to determine subjective norms; and control beliefs are assumed to determine perceived behavioral control (Ajzen & Sheikh, 2013). The TPB is designed to predict and explain human behavior in specific contexts, means in the mode of action, the behavior intention, together with perceptions of behavioral control, account for individuals' actual behavior, and the behavior intention can be predicted by the attitudes toward the behavior, subjective norms and perceived behavioral control (Ajzen, 1991). The complete theory is depicted in Figure 1.1. As the Central factor to perform a given behavior of the TPB, the individual's intention indicates how hard people are willing to try, and how much of an effort they are planning to exert to perform the behavior (Ajzen, 1991). However, a behavior intention can lead to behavior only when the behavior is under volitional control. The belief statements of the TPB for instruments come directly from pilot studies, which is important for Chinese PE student teachers' beliefs may differ from others in different countries.

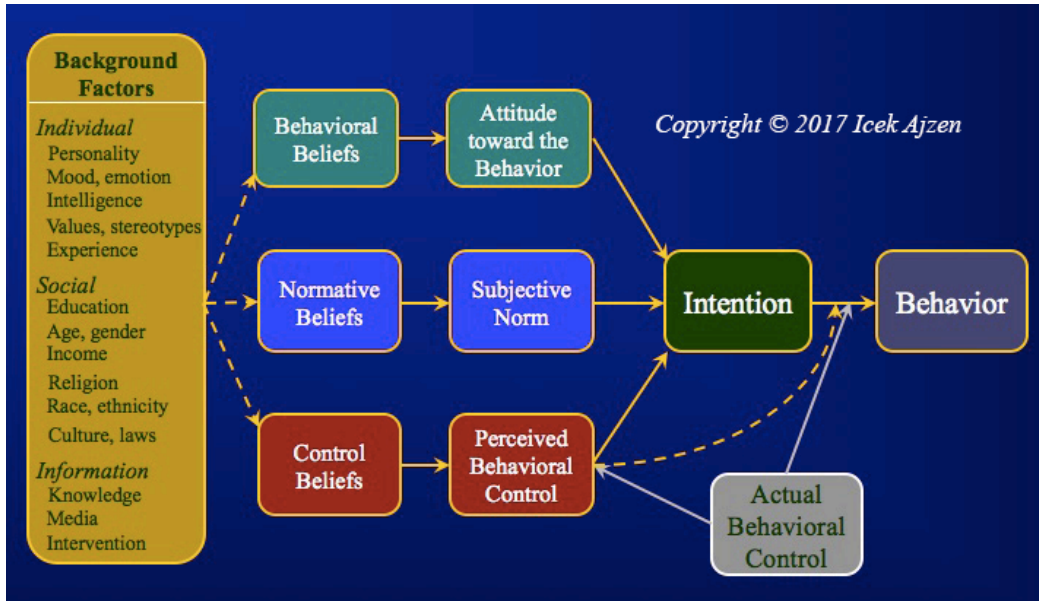

Figure 1.1: Theory of Planned Behavior with Background Factors (Ajzen, 1991).

The importance of the TPB has been increasingly accepted and was used in the field of inclusive physical education (Kudláček, Valkova, Sherrill, Myers, & French, 2002; Y. Liu et al., 2012; Rizzo et al., 2007; C. Sherrill, 2004). Based on the Theory of Planned Behavior, Kudláček et al. (2002) developed the questionnaire of "attitudes toward teaching individuals with physical disabilities in physical education" (ATIPDPE). The main part of the questionnaire is constructed by items relating to intention statements (4), behavioral beliefs (12), normative beliefs (7) and control beliefs (8). The attitude toward behavior, subjective norm and perceived behavioral control of TPB are posited to predict intentions in the ATIPDPE questionnaire. By study on 145 general physical education and 47 adapted physical education participants in three universities of the Czech Republic, they found the TPB was an appropriate model to access physical education teachers' beliefs. According to the Theory of Planned Behavior, PE student teachers' intentions to teach students with disabilities can account for their teaching behavior, which from the view of inclusive physical education will affect education equality of those students.

1.6 Definition of Key Terms

"The definition for the terms used that do not have a commonly known meaning or that have the possibility of being misunderstood" (Roberts, 2004, p. 139). The following terms are used throughout this study.

1.6.1 Preservice Physical Educator

In this study, preservice physical educator refers to undergraduate student who majors in physical education and will teach physical education classes in primary or secondary school after graduation. This term was well used in previous research (Di Nardo et al., 2014; Duchane et al., 2008; Folsom-Meek & Nearing, 2003; James et al., 2015; Nolan et al., 2000; James Schoffstall & Ackerman, 2007; Taliaferro, Hammond, & Wyant, 2015).This definition includes related terms that used in other research, such as Preservice Physical Education Teacher (Curtnersmith, 1996; Kafkas, Açak, Çoban, & Karademir, 2010; Keating et al., 2017; Chung Li, 2004; Novo-Corti, Muñoz-Cantero, & Calvo-Porral, 2011; Tsangaridou & O'Sullivan, 1994), Pre-professional Physical Education Teacher (Eubanks-Turner, Luckas, & Saydam, 2012; Folsom-Meek, Sherry, & Nearing, 1994),

Physical Education Student Teacher (Boggess, Mcbride, & Griffey, 2010; Iaochite & Neto, 2014; Maclean, 2007; Kim Smith, 2001; Templin, 1979), Prospective Physical Educator (Landers, 1970; Morgan et al., 2002), Prospective Physical Education Teacher (Hodge, 1998; Lund, Wayda, Woodard, & Buck, 2007; Marcon, Graca, & Nascimento, 2012; O'Bryant, O'Sullivan, & Raudensky, 2000), and so on.

1.6.2 Students with disabilities

According to *Chinese National Student Physical Health Standard (revised of 2014)* by the ME, students in full-time ordinary schools must take part in the national physical fitness test every year. However, due to disability, students can be exempted from the implementation of the standard if they are certified by the medical institute and approved by the physical education department. Meanwhile, under the current *Suiban Jiudu* (LRC) policy of compulsory education in China, most students with mild degree of disability are enrolled in general schools (Y. Liu et al., 2014). In my study, the "students with disability" refers to those students who can participate in LRC programs and general PE class in ordinary schools but exempted from the implementation of the *Chinese National Student Physical Health Standard*, which including students with low vision, hard of hearing, mildly mentally retarded, physical disabilities, and learning disorder, ADHD, autism, obesity, and so on.

Early in 1980s, some Chinese government policies mentioned that children who have disabilities but do not interfere with normal learning should be enrolled in regular primary and secondary schools (Committee, 1987; Council, 1986, 1988). At the first National Conference on special education (1988), the government formally adopted the concept and programs that child with disability learning in regular classroom (LRC) as a policy to develop special education.

Currently, the development strategy of inclusive education in China is a two-track approach, developing more special schools for students with severe disabilities and supporting LRC (Learning in Regular Classroom) programs for students with disabilities who can learn and together with normal students. Generally, students in LRC programs include students with

blindness and low vision, deaf and hard of hearing, mildly mentally retarded, physical disabilities, and learning disorder, language barrier, attention deficit hyperactivity disorder, autism(Xiao, 2005).

Ability or disability is a contextual variable. Based on adapted physical education as a service for students with disabilities learning in inclusive physical education environment, the functional aspect of ability or disability shifts from what a student can't do to what he or she can do in adapted physical activity. It focuses on the whole person in inclusive physical education, not the disability or the specific activity. There are many appellations to call the students with disabilities in PE classes (H. Chen, 2017; Jian Wang & Cao, 2014; Zhou, Liu, & Li, 2008), however, under the current *Suiban Jiudu* (Learning in Regular Classroom, LRC) policy of compulsory education in China, most students with mild degree of disability are enrolled in general schools (Y. Liu et al., 2014). Zhou et al. (2008) put forward the concept of "physically vulnerable groups", means the "groups that are at an unfavorable position in terms of physical health (mainly physical development), especially when they are engaging in physical strength demanding learning and living". They set standards to identify the groups with physical vulnerable: the first one is groups of individuals with chronic disease or disadvantage that makes them not suitable for participating in intense PE class activities; the second one is groups of individuals whose score under 60 assessed by the Chinese Student Physical Health Standard or the BMI is less than 20kg/m^2 or more than 26.5 kg/m^2. H. Chen (2017) argued that since the education object of adapted physical education is changing from individuals with disabilities to individuals with special needs, therefore, the groups with physical disadvantageous should also include individuals whose motor skills development is retarded and whose physical activity abilities are significantly interior. Jian Wang and Cao (2014) argued that the group of disadvantaged is the social groups of which caused by the inequality of social structure transformation or system defects. Then they think in the background of inclusive education, the need of students with disadvantaged for participate in physical education is increasing. Specifically, students who disadvantaged in learning motor skills and sports participation, in other words, students with disadvantaged mainly include two types, individuals with different disabilities and individuals with various physical activity obstacles. The *law of the*

People's Republic of China on the Protection of Persons with Disabilities classified the individuals with disabilities as the individual with visual impairment, hearing impairment, speaking impairment, intellectual disability, physical disability, mental disability, and multiple disabilities. Generally speaking, these students with obvious characteristics are students with physical activity disadvantaged.

1.6.3 Intention

The term intention is defined as "a person's location on a subjective probability dimension involving a relation between himself and some action", and a behavioral intention refers to "a person's subjective probability that he will perform some behavior" (Fishbein & Ajzen, 1975, p. 288). In this study, the term "preservice physical educators' intention toward teaching students with disabilities" means "preservice physical educators' subjective probability that they will teach students with disabilities". According the TPB theory, "intentions are assumed to capture the motivational factors that influence a behavior; they are indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behavior" (Ajzen, 1991). There are three independent determinants of intention: attitude toward the behavior, subjective norms, and perceived behavioral control. Attitude toward the behavior refers to the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question. Subjective norm refers to the perceived social pressure to perform or not to perform the behavior. Perceived behavioral control refers to the perceived ease or difficulty of performing the behavior and it is assumed to reflect past experience as well as anticipated impediments and obstacles (Ajzen, 1991).

1.7 Assumptions and delimitations

Assumptions are postulates, premises, and propositions that are accepted as operational for purposes of the research (Lunenburg & Irby, 2008, p. 135). This study was based on the following assumptions.

1. Preservice physical educators' intentions toward teaching students with disabilities were measurable.

2. Preservice physical educators who participated in this study understood the vocabulary on the survey.

3. Preservice physical educators who participated in this study responded accurately and honestly.

4. The instrument used to measure preservice physical educators' intentions toward teaching students with disabilities would accurately capture these characteristics.

5. Preservice physical educators who selected to participate in the mid-term training program worked hardly and proactively.

Delimitations are self-imposed boundaries set by the researcher on the purpose and scope of the research study (Lunenburg & Irby, 2008). This study had the following delimitations.

1. The sample of this study was delimitated to on boarding undergraduate general preservice physical educators, from freshman through senior enrolled during 2014 and 2017 in normal universities and comprehensive universities distributed in Eastern China, Central China and Western China.

2. The sample of mid-term adapted physical education training program was delimitated to preservice physical educators from sophomore in Southwest University.

3. This study was delimitated to a period of data collection that occurred from September 2017 to March 2018.

4. This study was delimitated to the use of a paper questionnaire survey, semi-structure interviews, and experimental research for data collection.

5. Participation in this study was voluntary.

1.8 Overview of the study

This study contained seven chapters. Chapter one included the statement of research problem, background of the study, purpose of the study, significance of the study, theoretical framework, definition of key terms, assumptions, and delimitations. Chapter two included literature review related to the development of inclusive physical education in China, intentions toward teaching students with disabilities, professional development related to intentions of preservice physical educator, and the Theory of Planned Behavior. Chapter three discussed research questions and hypotheses, methodological information including the research design, population and sample to be studied, sampling procedures, instrumentation, data collection methods, and statistical analysis. Chapter four focused on the findings and discussion of the questionnaire survey. Chapter five represented the findings and discussion of interview data. Chapter six showed the findings and discussion of the influence of mid-term adapted physical education training program on preservice physical educators' intention toward teaching students with disabilities and preservice physical educators' implicit attitude toward students with disabilities. Chapter seven contained a general discussion of all findings, conclusion of the study, suggestions for Chinese government and universities, and recommendations for future research.

Chapter 2: Literature Review

This chapter provided a theoretical framework for research on intention and discusses how relevant theories have been applied in the field of inclusive physical education. The following themes were discussed: the relationship between attitude and intention, research on physical educators' attitude toward inclusion, variables related to preservice physical educators' attitude, research on physical educators' intention toward inclusion, changing preservice physical educators' attitude and intention, and summary of this chapter.

2.1 The relationship between attitude and intention

Attitude is an important concept in the field of social psychology. Many definitions were formulated by researchers in the earlier decades of the 19th century. Bogardus (1924, p. 45) argued that attitude is a tendency to act toward or against some environmental factor which becomes thereby a positive or negative value. A well know definition of attitude was provided by Thurstone (1931): 'the affect for or against a psychological object'. Allport (1935, p. 810) confirmed that attitude is a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related. Krech and Crutchfield (1948) defined attitude as 'an enduring organization motivational, emotional perceptual and cognitive processes with respect to some aspect of the individual's world'. Based on attitude definitions in prior research, Ostrom (1969) conceptualized attitude as a learned predisposition to respond in a consistent evaluative manner toward an object or class of objects. Sherif and Sherif (1969, p. 269) pointed that attitude refers to subject-object relationships that the individual forms in his encounters with motivationally relevant objects that set the individual for or against them in some degree in a lasting way. Fishbein and Ajzen (1975, p. 5) described attitude as 'a learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object'. But, commonly, attitudes are viewed as summary evaluations of objects along a dimension ranging from positive to negative (Petty, 1994).

Attitudes are complex and are composed of a number of components, characteristics, or

dimensions (Carlson, 1956). The affective, behavioral, and cognitive components of attitude were identified by many researchers (Allport, 1935; Harding, Proshansky, Kutner, & Chein, 1969; Katz & Stotland, 1959; Ostrom, 1969; Rosenberg & Hovland, 1960). In order to evaluate attitude, the expectancy-value model was formed based on the assumption that evaluative judgments are the result of cognitive processes: associations between the attitude object and valued attributes (Ajzen, 2001). Although the evaluation of attitude is influenced by cognition and affect (Eagly & Chaiken, 1993; Pligt, Zeelenberg, Dijk, Vries, & Richard, 1998), but "it has been found that individuals differ in their reliance on cognition versus affect as determinants of attitude, and that the two components also take on different degrees of importance for different attitude objects" (Ajzen, 2001, p. 35).

Intention is a person's location on a subjective probability dimension involving a relation between himself and some action, and a behavioral intention refers to a person's subjective probability that he will perform some behavior (Fishbein & Ajzen, 1975, p. 288). In the theory of reasoned action, intentions are determined by attitude toward the behavior and subjective norms, but accurate prediction of a given intention can be expected only when the attitudinal and normative components are measured at the same level of specificity as is the intention (Fishbein & Ajzen, 1975, p. 333).

Aiming to clarify the relation between attitudes and behavior, the theory of reasoned action was put forward by Ajzen and Fishbein (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975) based on relevant theories on attitude. These theories include learning theories, expectancy-value theories, balance theory, the congruity principle, a theory of cognitive dissonance and theories of attribution. Theory of reasoned action assumes that people are rational and their behaviors are in a sensible manner, and postulates that a person's intention to perform (or not to perform) a behavior is the immediate determinant of that action. But intentions can change over time; and the longer of time the greater the likelihood changes of intentions (Ajzen, 1985). Intention is a person's location on a subjective probability dimension involving a relation between himself and some action, and a behavioral intention refers to a person's subjective probability that he will perform some behavior (Fishbein & Ajzen, 1975, p. 288). Intentions are determined by attitude toward the behavior, the

individual's positive or negative evaluations of performing the behavior, and subjective norms, individual's perception of the social pressures put on him to perform or not perform the behavior in question. But, accurate prediction of a given intention can be expected only when the attitudinal and normative components are measured at the same level of specificity as is the intention (Fishbein & Ajzen, 1975, p. 333). Ajzen (1991) reaffirmed this point: a behavioral intention can find expression in behavior only if the behavior in question is under volitional control.

In order to make up for the theory of reasoned action's limitations in dealing with behaviors over which people have incomplete volitional control, Ajzen (1991) modified the original theory into Theory of Planned Behavior (TPB), by adding a new component of intention: perceived behavior control. The Theory of Planned Behavior differs from the theory of reasoned action in its addition of perceived behavioral control (Ajzen, 1991, p. 183).

In the Theory of Planned Behavior, the Central factor still is the individual's intention to perform a given behavior. Under the situation that a behavioral intention can find expression in behavior only if the behavior in question is under volitional control, the stronger the intention to engage in a behavior the more likely should be its performance (Ajzen, 1991, p. 181).

Ajzen (1991, p. 184) claimed that most knowledge about the role of perceived behavioral control came from the concept of self-efficacy belief of Bandura and his associates (Bandura, 1982, 1991; Bandura, Adams, & Beyer, 1977; Bandura, Adams, Hardy, & Howells, 1980). The Theory of Planned Behavior places the construct of perceived behavioral control within a more general framework of the relations between beliefs, attitudes, intentions, and behavior, and can be used directly to predict behavioral exhibition (Ajzen, 1991, p. 184).

Attitude toward the behavior, subjective norm, and perceived behavioral control are the three conceptually independent determinants of intention in the Theory of Planned Behavior. Attitude toward the behavior refers to the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question; subjective norm refers to

the perceived social pressure to perform or not to perform the behavior; and perceived behavioral control refers to the perceived ease or difficulty of performing the behavior and it is assumed to reflect past experience as well as anticipated impediments and obstacles. Generally, the more favorable the attitude and subjective norm with respect to a behavior, and the greater the perceived behavioral control, the stronger should be an individual's intention to perform the behavior under consideration (Ajzen, 1991, p. 188).

The Theory of Planned Behavior postulates that behavior is a function of salient beliefs (information) relevant to the behavior. Three kinds of salient beliefs are distinguished: behavioral beliefs which are assumed to influence attitudes toward the behavior, normative beliefs which constitute the underlying determinants of subjective norms, and control beliefs which provide the basis for perceptions of behavioral control (Ajzen, 1991, p. 189).

The Theory of Planned Behavior is the first choice when subjective probabilities of success and actual control are less than perfect, although this theory and the original one are identical when the subjective probability of success and the degree of control over internal and external factors reach their maximal values (Ajzen, 1985, p. 36).

The Theory of Planned Behavior (TPB) has become one of the most frequently cited and influential models for the prediction of human social behavior, and it's citation number of per year has grown steadily from 22 in 1985 to a total of 4550 in 2010 (Ajzen, 2011). He argued that some research possibility should be expanded in the future of TPB, such as habit formation, personality traits, and personal moral norms (Ajzen, 1991), in order to respond to the query of TPB (Ajzen, 2011).

2.2 Research on physical educators' attitude toward inclusion

As early as 1960s, some researchers began to report teacher's attitude toward students with disabilities. For example, Combs and Harper (1967) explored effects of clinical labels on 160 experienced and inexperienced educators' attitudes toward exceptional children, and found that labeling did affect the educator's perception of exceptional children, but experience did not seem to affect educators' perceptions on exceptional children. Legislations carried out by different countries and declarations advocated by international

organizations during 1970s and 1990s set off generous research on teachers' attitudes toward students with disabilities. The development of PEATID and research of physical educators' attitudes toward students with disabilities was promoted under the setting. And the theory of reasoned action has been well validated in these studies.

The theory of reasoned action has been widely used as a framework for understanding and predicting intentions and behaviors from attitudes in the area of education (Asadi, 2014; Becker & Gibson, 1998; Fishbein & Middlestadt, 1987; Garg & Garg, 2008; Maghami, Shalmani, & Pourmohammadi, 2016; Mohammad Hossein, Leila, Maryam, & Jafar, 2015; Pryor, 1990; Stead, 1985; Tremethick, Johnson, & Carter, 2011; M. T. Tsai, Chen, & Chien, 2012). According to this theory, Rizzo created an instrument called the *Physical Educators' Attitude Toward Teaching the Handicapped* (PEATH). PEATH has been used in many studies to evaluate physical educators' attitude toward students with disabilities in regular physical classes. By using this survey instrument, K. Kim (1987) examined 213 Korea physical educators' attitudes toward teaching handicapped students in their regular classes, and found that Korean physical educators preferred to teach learning handicapped students rather than physically handicapped students in their regular classes. This result is in consistent with a research by Rizzo and Wright (1987) in the Mid-Western US. Haegele (2009) investigated the effects of education and experience on the attitudes of pre-service physical education educators toward teaching children with disabilities, and the results showed there was no significant difference in the pre-service teachers' attitudes toward teaching children with disabilities before and after the course. However, there was a trend toward pre-service attitudes becoming more favorable, and he suggested that higher education institutions can create a positive and effective adapted physical education course in physical education teacher preparation courses that may increase positive attitudes.

PEATH was revised into *Physical Educators' Attitudes Toward Teaching the Handicapped-II* (PEATH-II) with changes in disability labels in 1986, and into *Physical Educator's Attitudes Toward Teaching Individuals with Disabilities-III* (PEATH-III) with reformation of semantics to reflect person-first terminology in 1993 (Cheen, 2007). All of the two revised versions have been widely used in different countries (Campos, Ferreira, &

Block, 2013; Casebolt & Rizzo, 2004; Folsom-Meek & Others, 1995; Folsom-Meek & Rizzo, 2002; Folsom-Meek et al., 1994; Jacob & Suquet, 2010; Meegan & Macphail, 2006; Rizzo & Vispoel, 1991, 1992; Santos, Fumes, & Ferreira, 2014; C. Tsai, Wu, Tsai, Huang, & Jeng, 2005).

There were many different variables influencing the evaluation of physical educators' attitudes toward teaching students with disabilities. At least three types of variables were studied in past literature: variables related to students with disabilities, variables related to teachers, and the similar variables related to preservice physical educators.

Student-related variables include grade, disability levels, and types of disability. Students with disabilities in lower grades are viewed more favorably than those in higher grades (Minner & Knuston, 1982; Rizzo, 1984; Simons & Kalogeropoulos, 2005a). However, Rizzo and Wright (1987) reported that there was no significant attitudinal change as grade level advanced from 9-10 to 11-12.

Disability levels influenced the attitudes of physical educators. Students with mild disabilities were viewed more favorably than students with severe disabilities (Conatser, Block, & Lepore, 2000; Hodge, Ammah, Casebolt, Lamaster, & O'Sullivan, 2004; Kowalski & Rizzo, 1996). Block and Rizzo (1995b) reported Physical teachers were less favorable about teaching students with profound disabilities than they were about teaching students with severe disabilities in their regular classes. Conatser et al. (2000) found aquatic instructors were significantly more favorable toward teaching aquatics to students with mild disabilities than students with severe disabilities. In a research of Hodge et al. (2004, p. 411), physical teachers believed "it was more difficult to teach students with severe disabilities, particularly students with severe emotional disabilities, than those students with mild disabilities".

As to the types of disabilities, a lot of studies showed that physical educators held more favorable attitudes toward teaching students with learning disabilities than students with physical disabilities (Folsom-Meek et al., 1995a; Meegan & Macphail, 2006; Obrusnikova, 2008; Rizzo, 1984; Rizzo & Vispoel, 1991; Rizzo & Wright, 1987). Some studies reported

that physical education teachers hold negative attitudes toward the inclusion of students with behavioral or emotional disorders (Obrusnikova, 2008; Rizzo & Vispoel, 1991; Tripp, 1988). Stewart (1991) reported that undergraduate physical educators had more favorable attitudes toward students with physical disabilities than those with mental disabilities. But there were mixed attitudes of physical educators toward students with physical, sensory or mental disabilities (Obrusnikova, 2008; Rizzo & Vispoel, 1991; Tripp, 1988). Students with less severe disabilities were viewed more favorable than those with more severe disabilities (Avramidis & Norwich, 2002; Nthitu, 2011). Tant and Watelain (2016) argued that the reason of mixed attitude is that the type of disability is an important factor associated with the severity of disability and may evoke different attitudes. Some researchers have reported that physical, intellectual, and sensory disabilities appear to create the greatest challenges when including these students in PE classes (Casebolt & Hodge, 2010; Hutzler, 2003; Lauren J Lieberman, Robinson, & Rollheiser, 2006; Place & Hodge, 2001).

Many teacher-related variables were explored in a lot of studies on physical educators' attitudes toward teaching students with disabilities, such as gender, age, perceived competence in teaching students with disabilities, experience in teaching students with disabilities, academic preparation in special education or adapted physical education, training in adapted physical education, and other personality traits which might impact on the general physical education teacher's acceptance of the inclusion principle (Block & Rizzo, 1995b; Cheen, 2007; Pedersen et al., 2014; Rizzo & Kirkendall, 1995; Tant & Watelain, 2016).

Characteristics of gender and age in physical educators have been shown inconsistent relationships with attitudes (Block & Rizzo, 1995b). Some studies have showed that female teachers have more favorable attitudes toward teaching students with disabilities than did males (Aloia & Knuston, 1980; Folsom-Meek, Nearing, Groteluschen, & Krampf, 1999; Hodge, 1998; Hodge & Jansma, 1998; Rizzo & Vispoel, 1992). Nevertheless, most studies showed no association between gender and physical educators' attitudes toward teaching students with disabilities (Danermark, 2010; Doulkeridou et al., 2011; Duchane & French, 1998; Kowalski & Rizzo, 1996; Rizzo & Vispoel, 1991; Rizzo & Wright, 1988a; Tripp,

1988). Like gender, most of studies showed no relation between physical educators' age and their attitudes toward teaching students with disabilities (Folsom-Meek et al., 1995a; Folsom-Meek et al., 1994; Patrick, 1987; Rizzo & Vispoel, 1991; Rizzo & Wright, 1988a; Rowe & Stutts, 1987; Tripp & Rizzo, 2006), except a few studies reporting a significant relationship. For example, Forlin and Rizzo reported that older physical educators held less favorable attitudes toward teaching students with disabilities compared with younger educators (Forlin, 1995; Rizzo, 1985a).

Perceived competence in teaching students with disabilities has been suggested as a significant factor predicting their attitudes toward teaching these students in past research (Kowalski & Rizzo, 1996; Rizzo & Vispoel, 1991; Tant & Watelain, 2016). Attitudes of physical educators are more likely to be favorable for teachers with higher perceived teaching competency (Block & Rizzo, 1995b; Heikinaro-Johansson & Sherrill, 1994; Obrusnikova, 2008; Rizzo & Vispoel, 1991; Rizzo & Wright, 1988b; Schmidtgotz, Dolltepper, & Lienert, 1994; Tripp & Rizzo, 2006). A positive relationship between educators' teaching competence and attitude toward teaching students with disabilities has been reported in empirical literature.

Many studies have shown that experience of teaching students with disabilities had a positive effect on physical educators' attitudes towards these students (Marston & Leslie, 1983; Meegan & Macphail, 2006; Obrusnikova, 2008; Özer et al., 2013; Rizzo, 1985a; Rizzo & Wright, 1988b). Physical educators with more special education preparation are more likely to possess positive attitudes (Kuyini & Mangope, 2011; Marston & Leslie, 1983; Rizzo, 1985a; Rizzo & Vispoel, 1991, 1992).

In summary, based on prior findings, we assume that physical educators' attitudes are more likely to be favorable if they have: (a) higher perceived competence, (b) greater educational preparation, and (c) more experience in teaching students with disabilities.

2.3 Variables related to preservice physical educators' attitude

Preservice physical educators have expressed mixed feelings about teaching individuals with disabilities (Rizzo & Kirkendall, 1995). Favorable attitudes of them toward individuals

with disabilities were found in many studies (Shihui Chen, 2006; Mangope, Mannathoko, & Kuyini, 2013; Martin & Kudláček, 2010; Stewart, 1991). But, negative attitudes about teaching individuals with disabilities expressed by them, also (Depauw & Karp, 1990; Downs & Williams, 1994; Duchane et al., 2008). These mixed feelings are related to many variables that mentioned in the former part of inservice physical educator.

Some findings reported that female preservice physical educators hold positive attitudes toward teaching individuals with disabilities (Downs & Williams, 1994; Duchane et al., 2008; Folsom-Meek et al., 1999; Hutzler, Zach, & Gafni, 2005). But, some studies reported that gender does not have any effect on the attitudes of preservice physical educators towards inclusive PE (Martin & Kudláček, 2010; Xavier & Shendkar, 2017). According to some researchers, it seems that preservice physical educators with more years in college (Hutzler et al., 2005), higher perceived competence and academic preparation (Heikinaro-Johansson & Sherrill, 1994; Hodge & Jansma, 2000; Hodge, Tannehill, & Kluge, 2003; Kowalski & Rizzo, 1996; Rizzo, 1985a, 1986; Rizzo & Kirkendall, 1995; Schmidtgotz et al., 1994; Zanandrea & Rizzo, 1998), and more experience in teaching students with disabilities (Folsom-Meek et al., 1999; Hodge, 1998; Hodge & Jansma, 2000), will have more positive attitudes toward teaching individuals with disabilities. But, Rizzo and Kirkendall (1995) reported that younger future teachers(n=226) were associated with more favorable attitudes toward teaching students labeled BD (behaviorally disordered). Also, Varcoe and Boyle (2014) found in Australia that teaching experience of preservice physical educators had a significantly negative impact on pre-service teachers' attitudes.

The types of students' disabilities may influence the attitudes of preservice teachers. For example, Folsom-Meek et al. (1995b) reported that preservice physical educators' attitudes toward teaching students with LD (leaning disabled) were significantly more positive than EMR (educable mentally retarded) and BD (behaviorally disordered).

2.4 Research on physical educators' intention for inclusion

Rizzo and his colleagues revised PEATID-III into PEITID (Physical Educators' Intention Toward Teaching Individuals with Disabilities) (Tripp & Rizzo, 2006) and PEITID-II

(Rizzo, 2006) in order to echo the revision of Ajzen's theory from TRA to TPB. The instrument of PEITID was developed by using the theoretical constructs described in the TPB (Ajzen, 2002) and designed to assess the intentions of physical education teachers toward teaching children with disabilities. In 2007, Rizzo and his team designed a new instrument, Physical Educators' Intention Toward Teaching Individuals with Disabilities-II-Preservice Survey (PEITID-II-PS) to specially assess the intentions of preservice physical education teachers toward teaching children with disabilities(Rizzo et al., 2007; Su et al., 2007; Tripp, Oh, Chung, So, & Rizzo, 2007). In recent years, Rizzo revised the instrument again into a new one, PEITID-III (Rizzo, 2010). In detail composition of PEITID-III will be discussed in Chapter 3. In the last ten years, some researchers have studied physical educators' intention toward teaching children with disabilities using the instrument of PEITID, and reported that the PEITID consisted of sufficient internal consistency and was a valid instrument for investigating teachers' intent to teach individuals with disabilities in their general physical education classroom (Ellis et al., 2012; Oh et al., 2010; Rizzo et al., 2007; Su et al., 2007; Tripp et al., 2007; Tripp & Rizzo, 2006).

By using PEITID-II-PS, Oh et al. (2010) assessed the association between preservice teacher-related variables on preservice physical educators (n= 213) selected from universities in China, Korea, and the United States, and the results indicated that: (a) both intention and perceived behavioral control were predicted by teaching experience and perceived teaching competency, (b) attitude toward the behavior variable was predicted by prior teaching experience, special education coursework, and age, and (c) age and perceived teaching competency were associated with behavioral beliefs.

Tripp and Rizzo (2006) assessed the effect of the label CP (cerebral palsy) attached to a description of a child's motor ability and teacher attributes on the variables of the Theory of Planned Behavior (TPB) on two groups of elementary teachers (label and no-label) using PEITID, and found that when teachers were informed that a student has a disability by the use of a label, regardless of the student's actual motor ability, the intentions to teach this student were less than if the student did not have a label.

Columna et al. (2016) analyzed Latin American physical education (PE) teachers' intentions toward teaching students with disabilities using PEITID, and the result showed that gender, number of adapted-PE courses taken, and years of experience working with individuals with disabilities, had significant impacts on the participants' intentions toward teaching children with disabilities, but the effects of these predictor variables differed between countries (Argentina, Colombia, Costa Rica, Guatemala, and Venezuela).

Other studies also focused on physical educators' intention toward teaching students with disabilities using other instrument designed according to TPB. M Jeong and Block (2011) reported that intention was a significant predictor of physical educators' self-reported behavior in teaching students with disabilities using TBITSD (Teachers' Beliefs and Intentions toward Teaching Students with Disabilities) a TPB instrument the author created. M. Shahbazi, Esmaeili, and Sokhangoe (2013) evaluated the validity and reliability of TBITSD, and reported TBITSD questionnaire had acceptable to good Validity and reliability. By using TBITSD, Masumeh Shahbazi, Dooki, and Sokhangoe (2013) investigated the beliefs and intentions of PE teachers concerning inclusion of students with disabilities in physical education classes, and found that (a) attitudes, subjective norms, perceived behavioral control as well as behavioral, normative and control beliefs predict the PE teachers' intention to include and teach students with disabilities, and (b) the PE teachers' control behavior and intention predict their self-reported behavior concerning inclusion of students with disabilities.

By using a videotaped systematic observation system called Analysis of Inclusion Practices in Physical Education, Form T (AIPE-T), L. Wang, Wang, and Wen (2015) examined the teaching behavior of physical education (PE) teachers in teaching students with special needs and the factors that determine their teaching behavior, the results indicated that extended TPB components, including attitude, moral norm, affective beliefs, social norm, and perceived behavior control, were identified to determine the intention of PE teachers to teach students with special needs and their inclusive teaching practice.

2.5 Changing preservice physical educators' attitude and intention

Many studies focused on how to change and improve preservice physical educators' attitude and intention toward students with disabilities by setting up inclusive physical education courses and training programs. Many findings reported that preservice physical educators' attitude and intention toward students with disabilities can be changed and improved during their college life. But, other studies found that the effects of practicum experiences of the adapted physical education course on the attitudes of preservice physical educators were unclear.

Kowalski and Rizzo (1996) found that the combination of coursework with infusion and adapted physical education positively influenced preservice physical educators' perceived competence and led to favorable attitudes in teaching and working with individuals with disabilities. J. Schoffstall (2006) reported in his dissertation: preservice physical educators (n=108) felt that by completing the adapted physical education course they were generally well prepared to work with individuals with disabilities, and also believed their views on individuals with disabilities were positively influenced. By using the instrument of The Attitudes Towards Individuals with Physical Disabilities in Physical Education (ATIPDPE) (Kudláček et al., 2002), Di Nardo et al. (2014) examined the effects of an undergraduate adapted physical education course on the attitudes of preservice physical educators toward individuals with disabilities in Italy, and found that positive attitudes and very high intentions of preservice teachers towards inclusion after the course. Tindall, MacDonald, Carroll, and Moody (2015) examined the impact of a 10-week adapted physical activity program on the attitudes and perceptions Irish preservice physical educators (n=64) towards teaching children and young people with physical, intellectual, and learning disabilities, and revealed a positive change in attitude and perception toward both the idea of inclusion and working with persons with disabilities. Many other studies also found the similar positive attitude changed (Costello & Boyle, 2013; Varcoe & Boyle, 2014).

In Western America, Sofo et al. (2016) investigated the impact of an adapted physical education methods course on preservice teachers' (PTs') attitudes and intentions to teach students with disabilities, and the results indicated that the adapted methods course had

significant positive impact on PTs' knowledge of instructional techniques, perceived comfort, and intentions to teach students with disabilities, but it did not significantly affect PTs' attitudes toward students with disabilities. Haegele (2009) also found that there was no significant difference in the preservice physical educators' attitudes toward teaching children with disabilities before and after an adapted physical education course, but there was a trend toward preservice attitudes becoming more favorable.

Many findings suggested that practicum experiences had an impact on attitudes and intentions of preservice physical educators toward the inclusion of children with disabilities (Barber, Robertson, & Leo, 2016; Crawford, O'Reilly, & Flanagan, 2012; Ellis et al., 2012; Pedersen et al., 2014). For example, Folsom-Meek, Groteluschen, and Nearing (1996) reported that 54% of their participants' attitude scores improved significantly when 10 hours or more of practicum experience was provided. Hodge and Jansma (1999) also found that PE majors' attitude scores toward teaching individuals with disabilities were significantly higher at Weeks 10 and 15 compared to Week 1 of their practicum.

Pedersen et al. (2014) found Australian preservice teachers who experienced the larger adapted PE practicum had more favorable intentions towards teaching students with both disabilities (ADHD and autism) compared to the other cohort. Crawford et al. (2012)examined initial teacher training provision in Ireland in the training of preservice physical educators in Special Educational Needs (SEN), and found that time allocation (semester long modules), working with children with disabilities in mainstream settings (school or leisure center based), lack of collaboration with other PETE providers (n=4) and a need for continued professional development were themes in need of address. Barber et al. (2016) examined a new approach to fully accessible physical education, an innovative partnership in preservice physical education teacher education, by using qualitative research methodology, and found that teacher candidates challenged ideas of mainstream versus adapted physical education and discovered new possibilities for fully inclusive physical education. Ellis et al. (2012) researched the effect of practicum experiences on pre-professional physical education teachers (n=596) intentions toward working with individuals with disabilities, the results indicated that the level and quality of practicum

experience significantly influenced pre-professional teacher intentions toward and competence on teaching individuals with disabilities. But, in previous documents, there were some differences in detail. Some researchers found that on-campus practicum experiences improved the attitudes significantly more than off-campus practicum experience (Hodge & Jansma, 1999; Stewart, 1990). Hodge and Jansma (1999) pointed that on-campus sites gave the course instructor more control over the selection of students with disabilities, activities taught, types of interaction, selection and use of equipment and facilities, and the ratio of participants to students with disabilities. But this opinion was denied by another study after three years: no significant difference existed between the two practicum types (Hodge, Davis, Woodard, & Sherrill, 2002).

In recent years, some studies have used a clearly identified Service-Learning (SL) approach in the APE/APA field. Roper and Santiago (2014) qualitatively examined the attitudes toward individuals with disabilities of kinesiology undergraduate students after participating in a six-session (90 minutes per session) SL experience with P-12 students with disabilities by using qualitative research method, and revealed that undergraduate kinesiology students expressed a great deal of anxiety prior to the SL experience, but this anxiety dissipated after they began to work with the P-12 students with disabilities. Similar results found by Woodruff and Sinelnikov (2015) that the students experienced anticipation (i.e., uncertainty, fear) early in the SL experience, but during the familiarization stage, undergraduate students' interactions with the individuals with disabilities became more meaningful. But Santiago, Lee, and Roper (2016) reported that there were no statistically significant main or interaction effects for gender, group, and time (before, during, and after the SL) on the attitude scores of kinesiology students toward children with disabilities.

2.6 Summary

Based on the Theory of Reasoned Action, the attitudes of physical educator toward teaching students with disabilities were well studied, and its related variables were analyzed particularly in different countries. Mixed findings still exist regarding the associations between attitudes and its related variables in prior studies, especially when using the same survey instrument. The Theory of Planned Behavior has been well used throughout the

world, but the using the PEITID just on its beginning.

According to the documents review in Chapter 2 and in the part of “Background of the Study” in Chapter 1, it is easy to find that there are three insufficient in previous studies: (a) the PEITID and the Theory of Planned Behavior should be evaluated in more different countries and regions with different culture, (b) further research should be conducted on the variables on preservice and inservice physical educators’ intention toward teaching students with disabilities, and (c) the current situation of Chinese preservice physical educators’ intentions toward teaching individual with disabilities and how to improve their intentions toward teaching individual with disabilities ought to be assurance before the related courses of inclusive physical education is offered in the major of physical education in most normal universities and comprehensive universities of China.

Chapter 3: Methodology

3.1 Introduction

In this chapter, firstly, research questions, hypotheses, and research objectives were presented based on the literature review in chapter 2. Secondly, the research philosophy, approach, and strategy were discussed. Thirdly, the research design, participants and instruments, procedures and data analysis were determined.

3.2 Research questions and hypotheses

The research questions are a statement of the specific questions to which the researcher seeks an answer (B Johnson & Christensen, 2008, p. 78). In current situation, the research question is "what the situation of their intentions are, what factors influence their intentions, and is it possible to change their intentions to the positive aspect". Based on the literature review in Chapter 2, five specific research questions (Q) and hypotheses (Ha) were addressed in the following.

Q1. What are Chinese preservice physical educators' intentions toward teaching students with disabilities in their physical education classes?

Ha1. The intentions of Chinese preservice physical educators toward teaching students with disabilities in their physical education class will be positive.

Q2. Are preservice physical educators' intentions toward teaching students with disabilities in their physical education classes determined by: (a) behavioral belief (attitude), (b) normative belief (subjective norm), and (c) control belief (perceived behavioral control)?

Ha2. Preservice physical educators' intentions toward teaching students with disabilities in their physical education classes are determined by behavioral belief (attitude), normative belief (subjective norm), and control belief (perceived behavioral control).

Q3. Are preservice physical educators' self-reported behaviors in teaching students with

disabilities in their physical education classes determined by (a) intentions, and (b) control belief (perceived behavioral control)?

Ha3. Preservice physical educators' self-reported behaviors toward teaching students with disabilities in their physical education classes are determined by intentions and control belief (perceived behavioral control).

Q4. Which demographic variables, preconceived notions about disabilities, teaching experience, and special education courses are related to preservice physical educators' intentions toward teaching students with disabilities and self-reported teaching behavior?

Ha4. Some of demographic variables, preconceived notions about disabilities, teaching experience, and special education courses are related to preservice physical educators' intentions toward teaching students with disabilities and self-reported teaching behavior.

Q5. Is it possible that preservice physical educators' implicit attitude toward students with disabilities can be improved by a mid-term adapted physical education training program?

Ha5. It is possible that preservice physical educators' implicit attitude toward students with disabilities can be improved by a mid-term adapted physical education training program.

3.3 Research objectives

This study aims to promote the development of inclusive physical education, solve the shortage of inclusive physical educators, and meet the physical educational needs of students with disabilities in regular classroom, in the background of China.

The specific objectives in this study aim to investigate the current situation of Chinese preservice physical educators' intention toward teaching students with disabilities in their general physical education classroom, to analyze the influence factors of Chinese preservice

physical educators' intention toward teaching students with disabilities, to explore the possibility of changing the intention and their implicit attitude toward students with disabilities. The specific objectives were addressed in the following.

- To examine the whole situation of Chinese preservice physical educators' intention toward teaching students with disabilities;
- To examine the difference of Chinese preservice physical educators' intention toward teaching students with disabilities on demographic variables.
- To verify the validity and applicability of the Theory of Planned Behavior (TPB) and the instrument of Physical Educators' Intention toward Teaching Individuals with Disabilities (PEITID-III) in China;
- To analyze the influence factors of Chinese preservice physical educators' intention toward teaching students with disabilities
- To examine the possibility that preservice physical educators' implicit attitude toward students with disabilities can be improved by a mid-term adapted physical education training program.

3.4 Research philosophy, approach and strategies

In order to verify the research hypothesis, solve the research questions and achieve the research objectives, pragmatism philosophy, mixed research approach, and triangulation strategy were applied in this study.

3.4.1 Research philosophy: pragmatism

Philosophy is a Central and essential part of research in education and other social science disciplines. As Wilfred Carr argued that "research … always conveys a commitment to philosophical beliefs even if this is unintended and even though it remains implicit and unacknowledged …(Banister) cannot evade the responsibility for critically examining and justifying the philosophical ideas that their enquiries incorporate. It follows that

philosophical reflection and argumentation are Central features of the methods and procedures of educational research" (Carr, 1995, p. 1). The contribution of philosophy on research education focuses on two key areas: concerning how best to pursue inquiry in order to gain knowledge and relating to the value-relevance of particular studies (Hammersley, 2006).

In this study, the research philosophy is pragmatism, especially Dewey's philosophy of Education. The conception of pragmatism is associated with three American philosophers – Peirce, James, and Dewey. It was formed in the United States in 19th Century and became one of the main schools of modern Western Philosophy. At the beginning of twentieth Century, pragmatism was introduced to China and was advocated and promoted by several famous scholars – Hu Shi, Tao Xingzhi, Jiang Menglin, and Fu Sinian. As a student of Dewey, Tao Xingzhi inherited and developed Dewey's pragmatism and theories of education in China, and proposed the theory of life education with three basic points of view: life is education; society is school; and integrating teaching; learning and doing. Currently in China, pragmatism is being widely accepted and applied.

The important and basic views of pragmatism philosophy is that: (1) experience is the basis of the universe, (2) human cognition is limited in the field of experience, (3) the beliefs of human being are the starting point, (4) actions are the main means, and (5) achieving effect is the final goal. Looked from pragmatism, the most important thing is what is beneficial to practice and what can promote social justice (Burke Johnson & Christensen, 2012, p. 32).

On research, pragmatism focuses on the goals we are eager to achieve, and hold the opinion that research design should be planned and implemented on the basis of what can help us answer the question of research, advocates the inclusion and integration of different views, perspectives, positions and attitudes in the process of exploring knowledge. Pragmatism emphasizes that the research method should be consistent with the research questions, and the method that can solve the problem of the research is the best.

So, pragmatism provides rationality and justification for epistemology in many approaches, different world views, different research hypotheses and diverse data collection and

analysis methods.

3.4.2 Research approach: mixed approach

Based on pragmatism, this study adopted mixed approach and simple combined quantitative approach and qualitative approach during the process of collecting data and discussion.

After the quantitative and qualitative approaches, the mixed approach has become the third major research paradigm. The paradigm dialog in 90s of twentieth Century has made more and more social science researchers pay attention to and use mixed approach (Guba, 1990). The American Association for Education and Research (AERA) set up a group of special interests in the study of mixed approach (Special Interest Group) and the group held its first meeting in 2005. In the same year, the first International Conference focusing on mixed approach was held at University of Cambridge. A special mixed approach research journal named "Journal of Mixed Methods Research" appeared in 2007. The Mixed Methods International Research Association (MMIRA) was set up in 2013. More and more books to introduce and talk about mixed approach were published such as, "Designing and Conducting Mixed Methods Research" (Creswell & Clark, 2007), "Research Design: Qualitative, Quantitative, and Mixed Methods Approaches" (Creswell, 2009), and a book in educational research "Educational Research: Quantitative, Qualitative, and Mixed Approaches (Fourth Edition)" (Burke Johnson & Christensen, 2012).

Creswell hold that mixed method is a kind of research design with specific philosophical premise and inquiry method. "As a methodology, its philosophical hypothesis directing the different stages of the research process, and it is the organic mix of qualitative orientation and quantitative orientation. As a method, it collects, analyzes and mixed quantitative data and qualitative data in a study or a series of studies. Its basic idea is to combine quantitative and qualitative methods to better understand the problem of research"(Creswell & Clark, 2007).

So, according to the research problem and questions, this study adopts mixed approach to understand the current situation of Chinese preservice physical educators' intention toward teaching students with disabilities and to explore the possibility to promote their this kind of

intention by a mid-term adapted physical education training program and their implicit attitude toward students with disabilities. On the research design, this study equally used qualitative and quantitative methods to understand the research questions.

3.4.3 Research strategy: triangulation

Followed the mixed research approach, this study adopted triangulation strategy to collect and analyze data and discuss the research questions. In this study, the triangulation strategy related to questionnaire survey, semi-structure interview, and experimental research was used.

In social sciences, the triangle is often used to indicate that two (or more) methods are used in a study to check the results of one and the same subject. Triangulation means the verification of the results of the same research problem and question in different research approaches and methods. Early in 70s of 20th Century, Webb, Campbell, Schwart, and Sechrest (1966) coined the term 'triangulation' based on the concept of multiple operationalism in their research on psychological characteristics. Denzin (1978) defined triangulation as the combination of many kinds of research approaches when studying on the same phenomenon.

Triangulation is a powerful technique that facilitates the validation of data through cross-checking from two or more sources. It can be used in both quantitative (validation) and qualitative (inquiry) studies. By combining questionnaire survey, semi-structure interview, experimental research, and literature method, this study aims to overcome the weaknesses or intrinsic biases and problems that come from single-method, single-observer and single-theory studies.

3.5 Research design

This study included two phases (See Figure 3.1). The first phase of the study used questionnaire survey and interview methods to identify the current situation of the intentions of Chinese preservice physical educators toward teaching students with disabilities. The second phase of the study used experimental approach to certify the

possibility of the preservice physical educators' implicit attitudes toward students with disabilities could be positively influenced by mid-term adapted physical education training program.

In the first phase, the questionnaire PEITID-III and a semi-structure interview were used to collect data on preservice physical educators' intentions toward teaching students with disabilities. In the survey, the independent variables included demographic variables, preconceived notions about disabilities, teaching experience, and special education courses. The dependent variables were intention and its three direct components (attitude of behavior, subjective norms, and perceived behavioral control) and three indirect components (behavioral beliefs, normative beliefs, and control beliefs). Questions in the semi-structure interview were designed focusing on intention and its three direct components.

In the second phase, the 20-week mid-term physical education training program was applied to improve preservice physical educators' implicit attitude toward students with disabilities. Pretest-posttest control-group design was used in this phase. Experimental group and control group were all selected from the second academic year students in the major of PE teacher education in Southwest University and random assigned. Implicit Association Test will be conducted on control group and experimental group and take the result as pretest. Then the 20-week mid-term adapted physical education training program as independent variable applied on experimental group. The control group received no training and other aspects are the same with experimental group. After the training program, posttest was applied to experimental group and control group by using the same Implicit Association Test. And then to comparative the data of pretest and posttest, and experimental group and control group to confirm the possible that preservice physical educators' implicit attitude toward students with disabilities can be improved by a mid-term adapted physical education training program.

3.6 Participants

Participants of questionnaire survey were purposely selected from 10 normal or

comprehensive universities that located in the Eastern, Central and Western regions of China. Participants of interview were recruited from preservice physical educators of the second academic year in Southwest University. Participants of experimental research were preservice physical educators of the second academic year recruited from Southwest University when they finished the questionnaire PEITID-III.

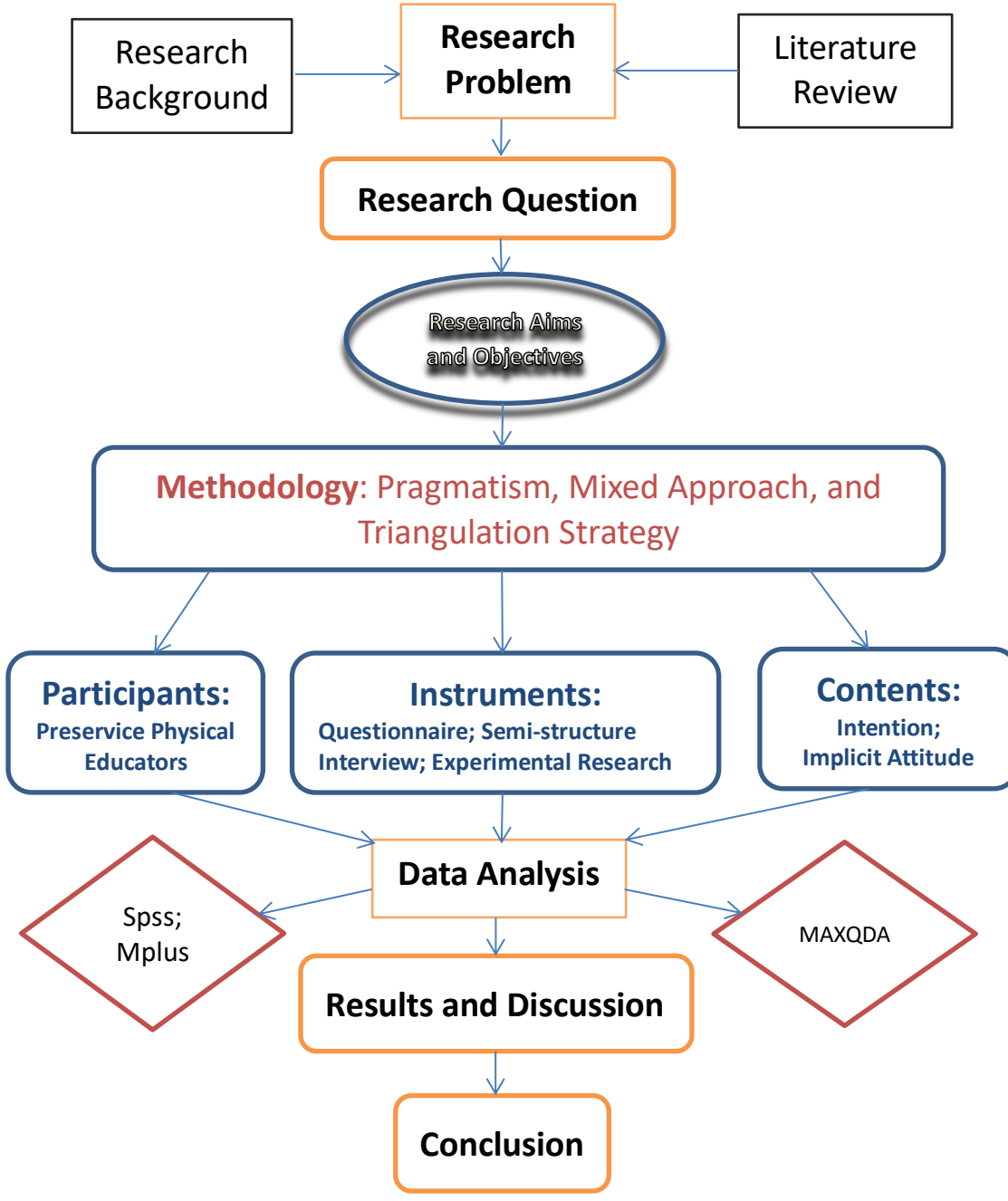

Figure 3.1 Research Design

3.7 Instruments

In the questionnaire survey, this study used the *Physical Educator's Intention Toward Teaching Individuals with Disabilities III (PEITID-III),* a new version of the *Physical Educator's Intention Toward Teaching Individuals with Disabilities II – Preservice Survey (PEITID-II-PS),* which designed by Terry Rizzo, State University of California, who authorized the Chinese translation for the use of this in the present study.

In order to supplement findings from the questionnaire survey, a semi-structure interview outline was conducted. All interview questions were formed according to PEITID around preservice physical educators' intention toward teaching students with disabilities and including questions about preservice physical educators' attitude toward the behavior, subjective norms, and perceived behavioral control related to teaching students with disabilities.

In order to triangulate findings from the questionnaire survey on influence factors of preservice physical educators' intention toward teaching students with disabilities, semi-structure interviews were made.

To make a more accurate evaluation of participants attitude towards students with disability, we used an Implicit Association Test (IAT) procedure was wrote in Inquisit3.0 which produced by Millisecond company.

3.8 Procedures

The data collection included three phases. The first phase was questionnaire survey, semi-structure interview, and the pretest of experimental research. The second phase was carrying out the mid-term adapted physical education training program to participants in experimental group, and the posttest of experimental research and questionnaire survey.

In the first phase (from September 1 of 2017 to October 20 of 2017), the PEITID-III was translated firstly from English to Chinese by bilingual professionals in physical education field. And then, the Chinese version of PEITID-III questionnaire was mailed to the school

of Physical Education in different universities via e-mail. The school printed the questionnaire and distributed the questionnaires to their teachers, and then teachers in the school sent the surveys to participants. The school mailed back the surveys that participants completed to the researcher. Thirdly, the author selected 85 participants who were the second academic year students from Southwest University as participants of the experimental research and randomly divided them into experimental group and control group. Then, the pretest of IAT was conducted to all participants in experimental group and control group, and the questionnaire survey results of the 85 participants were taking as the pretest of questionnaire survey. Finally, the author selected 14 people from the 85 participants as the participants in the semi-structure interview.

In the second phase (from October 23 of 2017 to March 16 of 2018), firstly, the participants of experimental group in the field experimental study accepted the mid-term (20-weeks, from October 23 of 2017 to March 8 of 2018) adapted physical education training program. And then, after one week, all participants in control group and experimental group completed the PEITID-III and accepted the IAT again, and took the results of questionnaire survey and IAT as the posttest data.

The mid-term adapted physical education training program began on October 23 of 2017 and end on March 8 of 2018, 20 weeks. The contents of the program are basic knowledge about inclusive education and adapted physical education, such as history, policies, teaching methods, and so on. Training forms include material reading, seminar, watching videos of adapted physical education classes, observation of adapted physical education classroom in regular school, and visit to special schools. The material reading throughout the program and the reading time is decided by students themselves. Four times seminars were assigned in the first four weeks and aimed to introduce the basic concepts and knowledge of inclusive education to participants. All of the three keynote speakers were major in inclusive education. The visiting of special school in 5^{th} week aimed to develop the concept of participants on special students with disabilities. This study selected a special school in local place, called Beibei Special School, which is very close to Southwest University. The times video watching of APE classes were relevant to the reading materials in the 6^{th}, 7^{th},

and 8th week and aimed to let participants to understand the teaching methods of adapted physical education. The training plan was showed in the following table. From the 9th week to 20th week, participants in experimental group read the book "Adapted Physical Education and Sport-5th Edition" wrote by Joseph P. Winnick and made notes in order to help them understand adapted physical education wholly.

3.9 Data analysis

The data from questionnaire survey and Implicit Association Test was analyzed by SPSS (Statistical Package for the Social Science) version 21.0 and Mplus version 7.0. Descriptive statistics, repeated measures ANOVA, and structural equation modeling technology were used in order to answer the research questions, and Pearson correlation coefficients were used to assess the strengths of linear relationships between pairs of study variables. MAXQDA were employed to analysis the data of interviews. All data analysis was implemented between October 2017 and March 2018 through SPSS, Mplus, and MAXQDA.

Table 3.1 The Plan of Mid-term Adapted Physical Education Training Program

Time	Contents	Form	Trainer	Remarks
1st week	(a)Introduction of Adapted Physical Education and Sports; (b)Introduction of Students with disabilities	(a)Self-directed reading material (2 hours) (b)Seminar (2 hours)	(a)Individual (b)Dr. Li Huan	Room 1, PE office Building
2nd week	(a)Adapted Physical Education(APE) (b)Introduction of Inclusive Education	(a)Self-directed reading material (2 hours) (b)Seminar (2 hours)	(a)Individual (b)Dr. Tan Qinyi	Room 1, PE office Building
3rd week	(a)Individualized Education Program (IEP) (b)Laws and Regulations about individuals with disabilities in PE	(a)Self-directed reading material (2 hours) (b) Seminar (2 hours)	(a)Individual (b)Dr. Zhang Guodong	Room 1, PE office Building

4th week	(a) Teaching Methods of APE(1) (b)The development of motor skill	(a)Self-directed reading material (2 hours) (b) Seminar (2 hours)	(a)Individual (b)Dr. Zhang Guodong	Room 1, PE office Building
5th week	(a) Teaching Methods of APE(2) (b)Visit a special school	(a)Self-directed reading material (2 hours) (b)Group visit (7 hours)	(a)Individual (b)Organizer: Dr. Zhang Guodong	Beibei Special School
6th week	(a)Intellectual Disabilities and APE (b)Watching videos of APE class (1)	(a)Self-directed reading material (2 hours) (b) 4 Groups (3 hours)	(a)Individual (b)Organizer: Dr. Zhang Guodong	Room 1, PE office Building
7th week	(a)Behavioral Disorders and APE (b)Watching videos of APE class (2)	(a)Self-directed reading material (2 hours) (b)Group (3hours)	(a)Individual (b)Organizer: Dr. Zhang Guodong	Room 1, PE office Building
8th week	(a)Asperger Syndrome and APE (b)Watching videos of APE class (3)	(a)Self-directed reading material (2 hours) (b)Group (3hours)	(a)Individual (b)Organizer: Dr. Zhang Guodong	Room 1, PE office Building
9th – 20th week	Read book “Adapted Physical Education and Sport-5th Edition” and made notes	Teacher advised reading material (2 hours each time, 2 times per week)	Individual	Home

Chapter 4: The Questionnaire Survey

4.1 Introduction

This chapter aimed to test the following hypotheses based on the data collected from 2305 preservice physical educators from 10 universities in China by using quantitative approach.

Ha1. The intentions of preservice physical educators toward teaching students with disabilities in a general physical education class will be positive.

Ha2. Preservice physical educators' intentions toward teaching students with disabilities in their physical education classes will be predicted by behavioral belief (attitude), normative belief (subjective norm), and control belief (perceived behavioral control).

Ha3. Preservice physical educators' self-reported behaviors toward teaching students with disabilities in their physical education classes will be predicted by intentions and control belief (perceived behavioral control).

Ha4. Some of demographic variables, preconceived notions about disabilities, teaching experience, and special education courses will be related to preservice physical educators' intentions toward teaching students with disabilities and self-reported teaching behavior.

4.2 Participants

This research involved 2305 preservice physical educators (782 females and 1523 males, M age = 20.12, SD = 1.47) purposely selected from 10 normal or comprehensive universities located in the Eastern, Central and Western China (see Table 4.1). The sample size for this survey was according to Krejecie and Morgan's (1970) model for estimation of sample size. The model showed a need for at least 384 preservice physical educators based on 95% confidence level. Each participant completed the Chinese version of *Physical Educator's Intention Toward Teaching Individuals with Disabilities III (PEITID-III)*. The survey included demographic questions (i.e., gender, age, grade, number of APE and SPED

coursework, months in teaching individuals with disabilities, there is or not a disability in family or close friends, do you have any disability, the quality of experience in teaching individuals with disabilities, and competency in teaching individuals with disabilities), and TPB variables (35 items).

All of participants were majored in physical education with four years academic bachelor degree, and all of them will be teaching physical education class in elementary or secondary schools when they graduate. This survey was approved by the Institutional Research Board at Southwest University and by appropriate authorities at each university where data were collected.

Table 4.1 Universities and Regions of Participants (N=2305)

Region	University	Number		Sum
		female	male	
Eastern China	East China Normal University	81	95	176
	Beijing Normal University	82	75	157
	Fujian Normal University	65	154	219
	Shandong Sport University	47	155	202
	Heze University	74	166	240
Central China	Central China Normal University	106	233	339
	Jiangxi Normal University	97	124	221
	Huanggang Normal University	73	110	183
Western China	Southwest University	106	182	288
	Shanxi Normal University	51	229	280

4.3 Instruments

This study used the *Physical Educator's Intention Toward Teaching Individuals with Disabilities III (PEITID-III),* a new version of the *Physical Educator's Intention Toward Teaching Individuals with Disabilities II – Preservice Survey (PEITID-II-PS),* which was designed by Professor Terry Rizzo, State University of California, who authorized the Chinese translation for the use of this in the present study.

The *PEITID-III* assesses preservice and inservice physical educators' intentions and attitudes toward the inclusion of disabilities in their physical education classes, conforms to

Ajzen's the Theory of Planned Behavior (TPB). The *PEITID-III* has 36 items. The first 35 items used a 7-piont Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree), and the item 36 is the Self-Reported Behavior (SRB) scoring by 0 (will not teach) or 1 (will teach). The 35 items grouped into 7 factors, including Intention (I, 2-items: 1, 2), Attitude Toward the Behavior (ATB, 3-items: 3, 4, 5), Subjective Norm (SN, 2-items: 6, 7), Perceived Behavior Control (PBC, 4-items: 8, 9, 10, 11), Behavioral beliefs (A_b, 6-items; 3 behavioral belief strength: 12, 13, 14; 3 outcome evaluation items: 15, 16, 17), Normative beliefs (SN_b, 12-items; 6 normative belief strength: 18, 19, 20, 21, 22, 23; 6 motivation to comply items: 24, 25, 26, 27, 28, 29), and Control beliefs (PBC_b, 6-items; 3 control belief strength: 30, 31, 32; 3 control belief power items). According to the TPB, behavioral beliefs produce *attitude toward the behavior*, normative beliefs result in *subjective norms*, and control beliefs give rise to *perceived behavioral control*, and in combination, attitude toward the behavior, subjective norm, and perception of behavioral control lead to the formation of a behavioral *intention*. The measurements of behavioral beliefs (A_b, SN_b, and PBC_b) were scored by multiplying belief strength by outcome evaluation, motivation to comply, and control belief power (*Σbiei, Σnimi, and Σcipi*). The 7 factors were measured in this study.

The *PEITID-III* was translated from English into Chinese by bilingual professors in physical education and educational psychology field. Four experts (A, B, C and D) reviewed the English version of the questionnaire in the America (A and B) and Czech Republic (C and D). All were APE professors with doctoral diploma. Three Chinese experts (E, F, and G) translated the English version of the questionnaire into a Chinese version after experts A, B, C and D approved the questionnaire for use in the survey. Two Chinese experts are (E and F) were educational Psychology professors in Southwest University, and the other (G) was an associate professor in Special Physical Education in Southwest University. But they suggested that the demographic information should be placed at the beginning in Chinese version and the student's name Hannah in English version should be changed into Xiaona (小娜), according to the habits of Chinese. So, there were corresponding changes in the Chinese version. Then, three other Chinese experts (H, I, and J) translated the Chinese version of the questionnaire back into English. Two (H and I) were

international graduated students with American nationality in Southwest University, and the other (J) was an associate professor in Teaching English in Southwest University. Finally, experts A and C conducted a final review of the questionnaire and agreed that the original and final English versions had the same meaning. So, the content meaning of the Chinese version was consistent with the English version.

4.4 Validity and reliability of the questionnaire

According to Messick's (1994) model for the validity of psychological assessment, six distinguishable aspects of construct validity are highlighted as a means of addressing Central issues implicit in the notion of validity as a unified concept: content, substantive, structural, generalizability, external, and consequential aspects (p. 16).

Messick emphasized that "both the content relevance and representativeness of assessment tasks are traditionally appraised by expert professional judgment" (p. 18). So, the e-edition of the Chinese version questionnaire was sent to twelve experts (2 professors in educational psychology, 2 professors in sports statistics, 5 associate professors in adapted physical education, and 3 associate professors in inclusive education) by e-mail to obtain their evaluations on the content validity. Table 4.2 showed that this questionnaire's content validity to test the pre-service physical educators' intention toward teaching students with disabilities in the background of China was high.

Table 4.2 Questionnaire's Validity Test by Experts

Evaluation Results	Evaluation of Content Representativeness	Evaluation of Content	Evaluation of the Consistency of Items with Survey Contents
	Number of Experts	Number of Experts	Number of Experts
Very reasonable	9	8	10
Reasonable	3	4	2
Unreasonable	0	0	0
Very unreasonable	0	0	0

For the aspect of substantive and structural validity, the content relevance of the *PEITID-III*, just like its former version *PEITID-II-PS and PEITID,* was established strictly following each aspect of the TPB and conforming to the criteria for content validation set forth by

Messick. For the 7 factors (35 items), the *PEITID-III* is the same with the *PEITID-II-PS*. The validation of the *PEITID-II-PS* was examined by Rizzo et al. (2007) modeled on the recommendations from Messick's six aspects of validity,(Allen & Yen, 1979) for sampling validity, and Kerlinger (1986) for content validity, the results indicated that the TPB and the *PEITID-II-PS* offer a very promising approach to PETE and APE professionals interested in assessing I, ATB, SN, PBC, A_b, SN_b, and PBC_b constructs associated with teaching students with disabilities in general physical education classes. So, the validation of the *PEITID-III* was better, too.

In order to guarantee the reliability of the Chinese version of *PEITID-III*, internal consistency and Test-retest reliabilities was computed in a pilot study (N=308) in Southwest University. For internal consistency of Likert scale, the most commonly used method is Cronbach alpha coefficient. According to Nunnally (1978), a generally acceptable reliability coefficient is .70 or higher. In the pilot study, Cronbach's alpha coefficient for the whole was satisfactory (α=.84), and for I, ATB, SN, PBC, A_b, SN_b, and PBC_b were .84, .70, .78, .67, .69, .88, and .74, respectively. For the current study, Cronbach's alpha coefficient for the whole scale was even higher (α=.85), and for I, ATB, SN, PBC, A_b, SN_b, and PBC_b were .88, .70, .76, .72, .71, .90, and .70, respectively.

4.5 Procedures

The researcher recruited 10 counselors respectively from the Department of Physical Education in the 10 universities, and trained them to be experimenters. And then, the researcher mailed questionnaires to the 10 experimenters, and they distributed the questionnaire to preservice physical educators of their university in class settings. When they collected the questionnaires of the four grades in their universities, they mailed them to the researcher.

Participants were informed that no identification information was collected and asked to fill in the questionnaire anonymously. The treatment of participants was in accordance with the ethical standards of the American Psychological Association.

4.6 Data analysis

SPSS 21.0 and Mplus 7.0 were used for data analysis. Missing values were replaced by their means. Descriptive statistics were used to report the means and standard deviation of each item on the demographic items and the TPB measures. ANOVAs, Chi-square test, and T test were used to compare the difference among demographic variables. Pearson correlation coefficients were used to assess the strengths of linear relationships between pairs of study variables.

4.7 Results

4.7.1 Descriptive statistics of participants on demographic measures

Table 4.3 presented, in all participants (n=2305, age=20.12±1.47) of this study, there were 1523 males accounted for 66.1% and 782 females hit 33.9%. For the aspect of grade, freshman owned 721 persons and occupied 31.3%, sophomore was 651 persons and accounted 28.2%, junior was 650 persons and represented 28.2%, and senior had 283 persons and occupied 12.3%. On the regional distribution, Eastern, Central and Western China had 994, 743, 568 participants, and accounted 43.1%, 32.2%, 24.6% respectively.

Table 4.3 Results of descriptive statistics on demographic measures

Age	Gender	Grade		Region	
20.13±1.48	Male (n=1523)	Freshman	(n=721)	Eastern	(n=994)
	Female (n=782)	Sophomore	(n=651)	Central	(n=743)
		Junior	(n=650)	Western	(n=568)
		Senior	(n=283)		
Sum					N=2305

In this survey (See Table 4.4), 75.4% participants (n=1737) reported that they had not taken any adapted physical education courses, and up to 92.5% participants (n=2228) reported they had not taken any special education course. For the part of participants who had taken courses, the number of adapted physical education course and special education course were 4 (SD=3.11) and 2 (SD=1.90), respectively.

Table 4.4 Results of descriptive statistics on APE and Special Education experience

Have you taken APE courses?		If yes, how many APE course?	Have you taken Special Education courses?		If yes, how many Special Education course?
Yes	No	M ± SD	Yes	No	M ± SD
n=568 24.6%	n=1737 75.4%	4.12 ± 3.11	n=172 7.5%	n=2133 92.5%	2.06 ± 1.89
Sum					N=2305

Table 4.5 showed, 8.4% participants (n=193) reported that they had family member with a disability, 13.1% participants (n=302) represented they had close friends with a disability, and only 1.5% (n=35) participants admitted they had a disability.

Table 4.5 Results of descriptive statistics on contact experience with disability

Do you have any family members with a disability?		Do you have any close friends with a disability?		Do you have a disability?	
Yes	No	Yes	No	Yes	No
n=193 8.4%	n=2112 91.6%	n=302 13.1%	n=2003 86.9%	n=35 1.5%	n=2270 98.5%
Sum					N=2305

Table 4.6 Results of descriptive statistics on experience teaching individuals with disabilities

Have any experience?		If yes, months in teaching?	Teaching quality			Teaching competency		
Yes	No	M ± SD	No experience	n=2216	96.1%	Not at all	n=357	15.5%
n=92	n=2213	3.32 ± 4.56	Not good	n=26	1.1%	A little	n=1048	45.5%
4.0%	96.0%		Satisfactory	n=47	2.0%	Somewhat	n=739	32.1%
			Very good	n=14	0.7%	Very	n=118	5.1%
			Excellent	n=2	0.1%	Extremely	n=43	1.9%
Sum								N=2305

Table 4.6 indicated there were only 4.0% (n=92) participants had experience on teaching individuals with disabilities and the mean months in teaching was 3.32 (SD=4.56), but as many as 96% (n=2213) participants reported they had no experience. In terms of the quality

of their typical experiences in teaching students with disabilities, up to 96.1% people (n=2216) expressed they had no experience, 1.1% people (n=26) felt not good, 2.0% people (n= 47) were satisfactory, 0.6% people (n=14) were very good, and only 0.1% people (n=2) reported they were excellent. As to the teaching competency, 15.5% (n=357) participants expressed they were not competent at all, more than 45.5% participants (n=1048) reported a little competent, 32.1% (n=739) were somewhat competent, 5.1% (n=118) were very competent, and only 1.9% (n=43) were extremely competency.

4.7.2 Gender differences on demographic variables

Table 4.7 showed the means and standard deviations of demographic variables for male and female participants. The ANOVA showed that gender had a significant effect on the number of adapted physical education course and teaching competency. Males had significantly more adapted physical education experience than females ($F(1, 2303) = 5.254$, $p = 0.022 < 0.05$). Males had significantly higher competency than females on teaching students with disabilities ($F(1, 2303) = 4.694$, $p = 0.030 < 0.05$). But, no differences were found between males and females regarding age, the number of special education course, and months in teaching individuals with disabilities, and teaching quality.

Table 4.7 Results of descriptive statistics and ANOVA on demographic measures between genders

Measures	Males (n = 1523)	Females (n = 782)	F	p
Age	20.12 ± 1.44	20.12 ± 1.53	.000	1.000
APE course	**1.10 ± 2.39**	**.86 ± 2.28**	**5.254**	**.022***
Special Education course	.16 ± .72	.13 ± .80	.861	.354
Month in teaching	.12 ± 1.10	.15 ± 1.14	.407	.523
Teaching quality	1.07 ± .39	1.08 ± .41	.352	.553
Teaching competency	**2.35 ± .87**	**2.27 ± .84**	**4.694**	**.030***

n. s. $p > .05$; * $p < .05$; ** $p < .01$; *** $p < .001$

4.7.3 Difference on demographic measures among regions

Table 4.8 presented the means and standard deviations of six demographic variable including age, adapted physical education course, special education course, month in teaching, teaching quality and teaching competency for participants from Eastern, Central

and Western of China.

Table 4.8 Results of descriptive statistics and ANOVAs on demographic measures among the regions

Measures	Regions	M ± SD	F	p
Age (n=2305)	Eastern (n=994)	20.17 ± 1.50		
	Central (n=743)	19.84 ± 1.36		
	Western (n=568)	20.41 ± 1.50	25.359	**.000*** **
APE course (n=2305)	Eastern (n=994)	.86 ± 2.28		
	Central (n=743)	1.07 ± 2.43		
	Western (n=568)	1.23 ± 2.37	4.958	**.007** **
Special Education course (n=2305)	Eastern (n=994)	.11 ± .57		
	Central (n=743)	.23 ± 1.00		
	Western (n=568)	.14 ± .63	5.657	**.004** **
Month in teaching (n=2407)	Eastern (n=994)	.15 ± 1.45		
	Central (n=743)	.14 ± .83		
	Western (n=568)	.09 ± .69	.617	.540
Teaching quality (n=2407)	Eastern (n=994)	1.06 ± .37		
	Central (n=743)	1.10 ± .47		
	Western (n=568)	1.05 ± .32	3.273	**.038***
Teaching competency (n=2407)	Eastern (n=994)	2.38 ± .96		
	Central (n=743)	2.29 ± .78		
	Western (n=568)	2.27 ± .79	4.006	**.018***

n. s. $p > .05$; * $p < .05$; ** $p < .01$; *** $p < .001$

The ANOVAs revealed that there were statistically significant differences among the regions on age, the number of taken adapted physical education and special education course, teaching quality, and teaching competency. Western and Eastern preservice physical educators were statistically significant older than Central preservice physical educators ($F(2, 2302) = 25.359$, $p = 0.000 < 0.001$). Western and Central preservice physical educators had taken more adapted physical education courses than Eastern preservice physical educators had ($F(2, 2302) = 4.958$, $p = 0.007 < 0.01$). But on special education course, Central preservice physical educators had taken more than Western and Eastern preservice physical educators had ($F(2, 2302) = 5.657$, $p = 0.004 < 0.01$). As to the teaching quality of preservice physical education, students in Central China was significantly higher than those

in Eastern and Western China (F (2, 2302) = 3.273, p= 0.038 < 0.05). On the teaching competency of preservice physical education, students in Eastern China was significantly higher than in those Central and Western China (F (2, 2302) = 4.006, p= 0.018 < 0.05). But, for the month in teaching individuals with disabilities of preservice physical educators, there were no statistically differences among the regions.

Table 4.9 showed the percentage and adjusted residual of five measures (teaching quality, teaching competency, family member with a disability, close friend with a disability, and self has a disability) for participants from Eastern, Central and Western China.

Table 4.9 Results of descriptive statistics and Chi-square test on demographic measures among the regions

Response Variable / Design Variable			Regions of China			
			Eastern (E)	**Central (C)**	**Western (W)**	**Post**
Teaching quality	No experience	n (%, AR)	960 (41.6%, 1.0)	705 (30.6%, -2.2)	551(23.9%, 1.2)	
(n=2305)	Not good	n (%, AR)	12 (0.5%, .3)	8 (0.3%, -.2)	6 (0.3%, -.2)	
	Satisfactory	n (%, AR)	17 (0.7%, -1.0)	21 (0.9%, 1.8)	9 (0.4%, -.9)	
	Very good	n (%, AR)	3 (0.1%, -1.6)	9 (0.4%, 2.6)	2 (0.1%, -.9)	
	Excellent	n (%, AR)	2 (0.1%, 1.6)	0 (0.0%, -1.0)	0 (0.0%, -.8)	
χ^2 (8) = 12.883; p= .116						
Teaching competency	Not at all	n (%, AR)	179 (7.8%, 2.9)	99 (4.3%, -2.0)	79 (3.4%, -1.2)	
(n=2305)	A little	n (%, AR)	387 (16.8%, -5.5)	367 (15.9%, 2.6)	294(12.8%, 3.5)	
	Somewhat	n (%, AR)	325 (14.1%, .6)	247 (10.7%, .8)	167 (7.2%, -1.6)	
	Very	n (%, AR)	76 (3.3%, **4.8**)	21 (0.9%, **-3.4**)	21 (0.9%, -1.8)	**E>C**
	Extremely	n (%, AR)	27 (1.2%, 2.6)	9 (0.4%, -1.6)	7 (0.3%, -1.3)	
χ^2 (8)= 54.791; p= .000						
Family member with	Yes	n (%, AR)	60 (2.6%, -3.5)	73 (3.2%, 1.7)	60 (2.6%, 2.2)	
a disability (n=2407)	No	n (%, AR)	934 (40.5%, **3.5**)	670 (29.1%, -1.7)	508(22.0%,**-2.2**)	**E>W**
χ^2 (2)= 12.669; p= .002						
Close friend with	Yes	n (%, AR)	102 (4.4%, -3.5)	95(4.1%, -.3)	105(4.5%, 4.4)	
a disability (n=2407)	No	n (%, AR)	892 (38.7%, **3.5**)	676(28.1%, .3)	463(20.1%,**-4.4**)	**E>W**
χ^2(2)= 21.570; p= .000						
Self has a disability	Yes	n (%, AR)	23 (1.0%, **2.7**)	2 (0.1%, **-3.4**)	10 (0.4%, .5)	**E>C**
(n=2305)	No	n (%, AR)	971 (42.1%, -2.7)	741 (32.1%, 3.4)	558 (24.2%, -.5)	
χ^2(2)= 12.183; p= .002						

The critical value of AR at 0.05 significant levels is 1.96

The Chi-square test revealed that there were statistically significant differences among the regions on five response variables (no experience, not good, satisfactory, very good, and excellent) of preservice physical educator's self-reported teaching quality. But, the statistically significant differences among the regions on response variables of other four measures were found. According to the value of adjusted residual (AR), for the option of "Very" in the measure of "Teaching competency", the percentage (= 3.3%, AR = 4.8) selected by participants from Eastern region was significantly more than the percentage (= 0.9%, AR = -3.4) selected by participants from Central China. As to the measure of "Family member with a disability", the percentage (= 40.5%, AR = 3.5) that selected "No" by preservice physical educators from Eastern was significantly higher than that (= 22.0%, AR = -2.2) of preservice physical educators from Western. For the measure of "Close friend with a disability", the percentage (= 38.7%, AR = 3.5) that selected "No" by preservice physical educators from Eastern was still significantly higher than that (= 20.1%, AR = -4.4) of preservice physical educators from Western. But, on the measure of "Self has a disability", the percentage (= 1.0%, AR = 2.7) that selected "Yes" by preservice physical educators from Eastern was still significantly higher than that (= 0.1%, AR = -3.4) of preservice physical educators from Central.

4.7.4 The current situation of I and SRB for inclusion

Table 4.10 presents the means and standards deviation of measure I (intention) and SRB (self-reported behavior), and the mean of I (5.86) and SRB (1.77) were higher than the theoretical middle value of themselves. This indicated that Chinese preservice physical educator's intention toward teaching individuals with disabilities was very positive (M = 5.86 > 4.00) in general. Additionally, the values of their self-reported behavior (modify their class activity or make an accommodation to enable a student who labeled ADHD to

Table 4.10 Results of descriptive statistics on the measure I and SRB

Measure	N	Minimum	Maximum	Mean ± SD
I (Intention)	2305	2	7	5.86 ± 1.24
SRB (Self-reported Behavior)	2305	1	2	1.77 ± .42
valid N (listwise)	2305			

participate their physical education class) were correspondence with values of their intention. Therefore, Ha 1 was confirmed.

4.7.5 Differences on I and SRB in different demographic measures

To examine differences of the measure I (intention) in different demographic measures which have two category variables (including Gender, taken APE and Special Education course, teaching experience, and disability experience), Independent-Samples T test was applied. In Table 4.11, the results indicated, only on the measure of "Have you taken APE courses", there was a statistically significant difference ($t = 2.286$, $p = 0.022 < 0.05$).

Table 4.11 Results of descriptive statistics and T test on I in different demographic measures

Demographic measures	Category	M ± SD	t	p
Gender (n = 2305)	male (n = 1523)	5.87 ± 1.22	1.042	.297
	female (n = 782)	5.82 ± 1.27		
Have you taken APE courses? (n = 2305)	Yes (n = 568)	5.95 ± 1.15	2.286*	**.022**
	No (n = 1737)	5.82 ± 1.26		
Have you taken Special Education courses? (n = 2305)	Yes (n = 172)	5.89 ± 1.16	.398	.691
	No (n = 2133)	5.85 ± 1.24		
Have any teaching experience? (n = 2305)	Yes (n = 92)	6.04 ± 1.09	1.491	.136
	No (n = 2213)	5.85 ± 1.24		
Do you have any family member with a disability? (n = 2305)	Yes (n = 193)	5.83 ± 1.24	-.320	.749
	No (n = 2112)	5.86 ± 1.24		
Do you have any close friend with a disability? (n = 2305)	Yes (n = 302)	5.97 ± 1.15	1.828	.068
	No (n = 2003)	5.84 ± 1.25		
Do you have a disability? (n = 2305)	Yes (n = 35)	5.71 ± 1.06	-.692	.489
	No (n = 2270)	5.86 ± 1.24		

n. s. $p > .05$; * $p < .05$; ** $p < .01$; *** $p < .001$

This showed that the intention of preservice physical educators who had taken APE courses were different with the intention of preservice physical educators who had not taken APE courses, and the intention of preservice physical educators who had taken APE courses were significantly higher than those who had not taken APE courses. However no

statistically significant differences were found on other measures (Gender, taken Special Education course, teaching experience, and disability experience). So, the influence of APE courses on the intention of preservice physical educators toward teaching students with disabilities should be paid attention.

To examine the differences of the measure I (intention) in different demographic measures which have three or more category variables, ANOVA was applied to the data to assess the difference on I (intention) in different regions and grades. Table 12 presented, on the measure of region, there were statistically significant differences ($F = 24.385$, $p = 0.000 < 0.001$) on preservice physical educators' I (intention) among different regions.

Table 4.12 Results of descriptive statistics and ANOVAs on I in different demographic measures

Demographic measures	Category	M ± SD	F	p	Tamhane's T2
Region (n=2305)	Eastern (E, n=994)	5.75 ± 1.30	24.385***	**.000**	C > E
	Central (C, n=743)	6.11 ± 1.08			C > W
	Western (W, n=568)	5.71 ± 1.27			
Grade (n=2305)	First (1,n=721)	6.19 ± 1.04	45.052***	**.000**	1 > 2 > 3
	Second (2, n=651)	5.97 ± 1.17			2 > 4
	Third (3, n=650)	5.48 ± 1.34			
	Fourth (4, n=283)	5.62 ± 1.33			

n. s. $p > .05$; * $p < .05$; ** $p < .01$; *** $p < .001$

A further Post Hoc test (Tamhane's T2) showed, Central preservice physical educators' intention was significantly higher than those of Eastern and Western preservice physical educators (see Figure 4.1). But there was no significant difference on preservice physical educators' intention between Eastern and Western China. As to the measure of grade, there also were statistically significant differences ($F = 45.052$, $p = 0.000 < 0.001$) on preservice physical educators' I (intention) among different grades. The Post Hoc test (Tamhane's T2) revealed, the first grade preservice physical educators hold the highest intention, followed by the second grade, the fourth grade and the third grade (see Figure 4.2). Furthermore, the first grade preservice physical educators' intention was statistically significant higher than that of the second grade, the fourth grade and the third grade preservice physical educators, the second grade preservice physical educators' intention was statistically significant higher than those of the fourth grade and the third grade, but there were no statistically significant

difference on intention between the fourth grade and the third grade preservice physical educators.

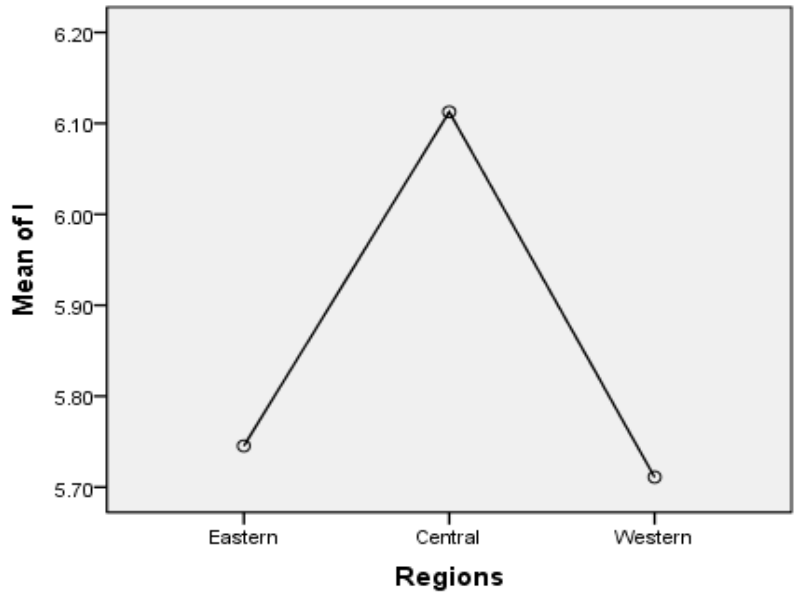

Figure 4.1 Mean of I on different regions

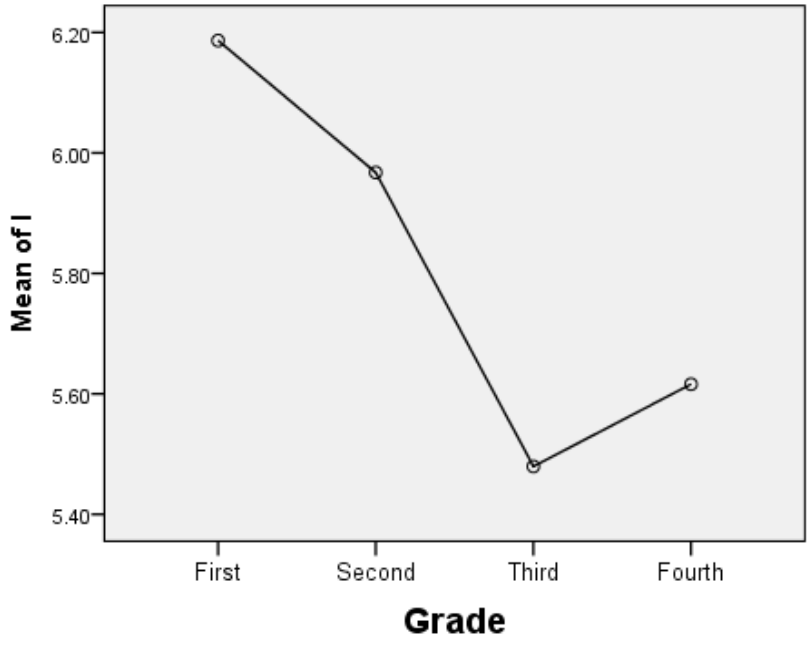

Figure 4.2 Mean of I on different grades

To examine the differences of the measure SRB (self-reported behavior) in different demographic measures which have two category variables (including Gender, taken APE and Special Education course, teaching experience, and disability experience), Independent-Samples T test was applied. In Table 4.13, the results indicated, only on the measure of "Have you taken Special Education courses", there was a statistically significant difference ($t = 2.397$, $p = 0.017 < 0.05$). This indicated that the self-reported behavior of preservice physical educators who had taken Special Education courses were different from those who had not taken Special Education courses, and the self-reported behavior of preservice physical educators who had taken Special Education courses were significantly higher than those who had not taken Special Education courses. But, on other measures (Gender, taken APE course, teaching experience, and disability experience), there were no statistically significant differences.

Table 4.13 Results of descriptive statistics and T test on SRB in different demographic measures

Demographic measures	Category	M ± SD	t	p
Gender (n = 2305)	male (n = 1523)	1.77 ± .42	-.083	.934
	female (n = 782)	1.77 ± .42		
Have you taken APE courses? (n = 2305)	Yes (n = 568)	1.79 ± .41	.905	.366
	No (n = 1737)	1.77 ± .42		
Have you taken Special Education courses? (n = 2305)	Yes (n = 172)	1.84 ± .37	2.397*	**.017**
	No (n = 2133)	1.76 ± .42		
Have any teaching experience? (n = 2305)	Yes (n = 92)	1.83 ± .38	1.399	.165
	No (n = 2213)	1.77 ± .42		
Do you have any family member with a disability? (n = 2305)	Yes (n = 193)	1.79 ± .41	.682	.495
	No (n = 2112)	1.77 ± .42		
Do you have any close friend with a disability? (n = 2305)	Yes (n = 302)	1.78 ± .41	.448	.654
	No (n = 2003)	1.77 ± .42		
Do you have a disability? (n = 2305)	Yes (n = 35)	1.69 ± .47	-1.086	.285
	No (n = 2270)	1.77 ± .42		

n. s. $p > .05$; * $p < .05$; ** $p < .01$; *** $p < .001$

To examine differences of the measure SRB (self-reported behavior) in different

demographic measures which have three or more category variables, ANOVA was applied to the data to assess the difference on SRB in different regions and grades. Table 4.14 presents, on the measure of region, there were statistically significant differences ($F = 9.745$, $p = 0.000 < 0.001$) on preservice physical educators' self-reported behavior among different regions. A further Post Hoc test (Tamhane's T2) showed that, Central and Western preservice physical educators' intention were significantly higher than that of Eastern preservice physical educators (see Figure 4.3). But there was no significant difference on preservice physical educators' self-reported behavior between Central and Western. As to the measure of grade, there also were statistically extremely significant differences ($F = 10.754$, $p = 0.000 < 0.001$) on preservice physical educators' self-reported behavior (intention) among different grades. The Post Hoc test (Tamhane's T2) revealed that, the first grade preservice physical educators hold the highest self-reported behavior, followed by the second grade, the fourth grade and the third grade (see Figure 4.4). Furthermore, the first grade preservice physical educators' self-reported behavior was statistically significant higher than that of the third grade and the fourth grade preservice physical educators, the second grade preservice physical educators' intention was statistically significant higher than that of the third grade, but there were no statistically significant difference between the fourth grade and the third grade preservice physical educators' self-reported behavior.

Table 4.14 Results of descriptive statistics and ANOVAs on SRB in different demographic measures

Demographic measures	Category	M ± SD	F	p	Tamhane's T2
Region (n=2305)	Eastern (E, n=994)	1.73 ± .45	9.745***	**.000**	C > E
	Central (C, n=743)	1.81 ± .39			W > E
	Western (W, n=568)	1.79 ± .41			
Grade (n=2305)	First (1,n=721)	1.83 ± .38	10.754***	**.000**	1 > 3
	Second (2, n=651)	1.79 ± .41			1 > 4
	Third (3, n=650)	1.71 ± .45			2 > 3
	Fourth (4, n=283)	1.72 ± .45			

n. s. $p > .05$; * $p < .05$; ** $p < .01$; *** $p < .001$

In summary, in demographic variables, adapted physical course, special education course, region and grade statistically significant related to Chinese preservice physical educators' intention and self-reported behavior toward teaching students with disabilities. So, Ha 4

was confirmed.

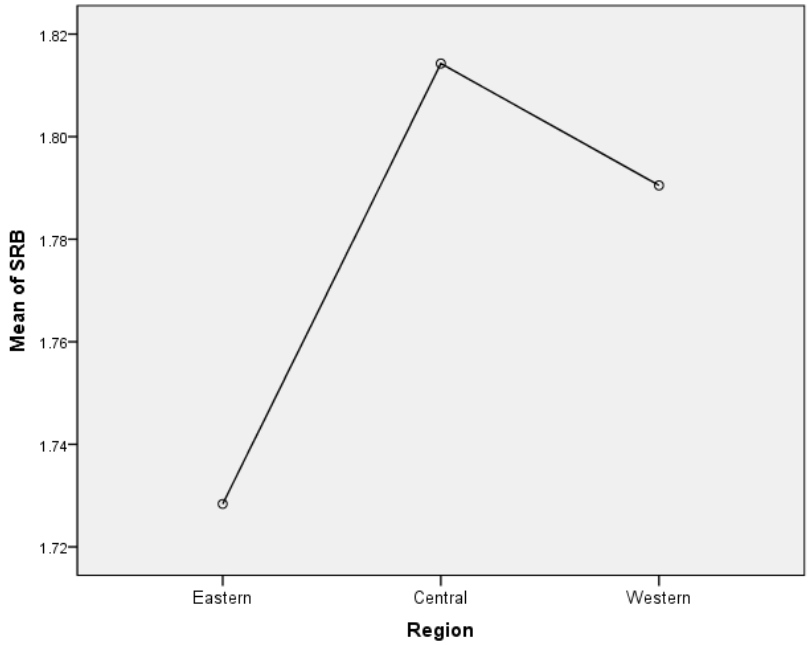

Figure 4.3 Mean of SRB on different regions

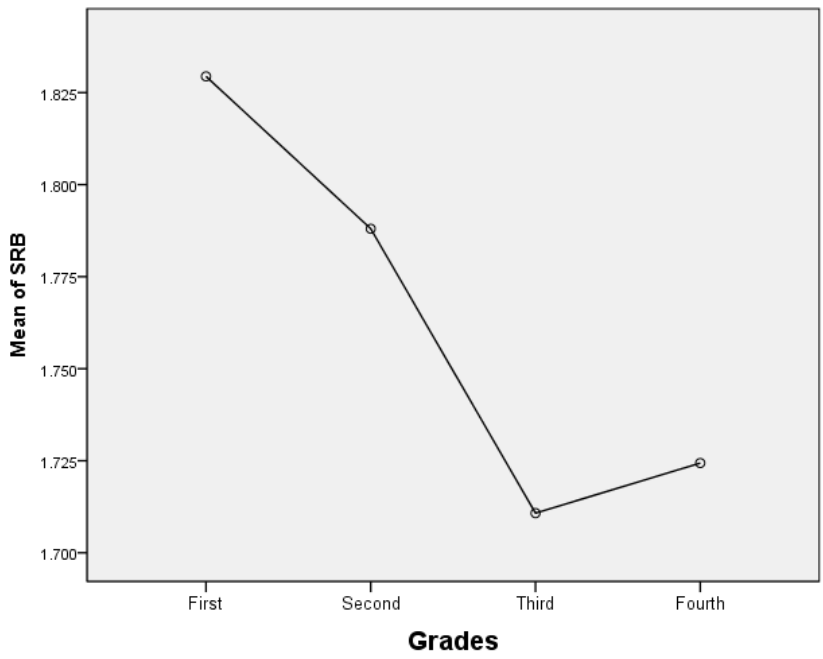

Figure 4.4 Mean of SRB on different grades

4.7.6 Relationships among demographic variables and TPB measures

Table 4.15 Results of multiple regression on the predication of the TPB measures

TPB measures	Demographic variables	B	β	t	p
I	APE course	.000	.001	.040	.968
	Special Education course	.008	.005	.222	.825
	Teaching quality	.116	.037	1.733	.083
	Teaching competency	.094	.066	3.132**	**.002**
$R = .080; R^2 = .006; R^2_{change} = .005; F = 3.724^{**}$					
ATB	APE course	.006	.011	.515	.607
	Special Education course	.004	.002	.114	.909
	Teaching quality	.097	.033	1.521	.128
	Teaching competency	.076	.055	2.639**	**.008**
$R = .069; R^2 = .005; R^2_{change} = .003; F = 2.789^{**}$					
SN	APE course	-.002	-.004	-1.97	.844
	Special Education course	.022	.013	.592	.554
	Teaching quality	.114	.035	1.629	.104
	Teaching competency	.071	.047	2.257	**.024**
$R = .065; R^2 = .004; R^2_{change} = .003; F = 2.469^{*}$					
PBC	APE course	.009	.020	.911	.362
	Special Education course	.041	.027	1.239	.216
	Teaching quality	-.095	-.033	-1.545	.122
	Teaching competency	.001	.001	.036	.971
$R = .045; R^2 = .002; R^2_{change} = .000; F = 1.154^{n.s.}$					
Ab	APE course	937	.080	3.756***	**.000**
	Special Education course	.592	.016	.738	.461
	Teaching quality	-.507	-.007	-.341	.733
	Teaching competency	.765	.024	1.148	.251
$R = .089; R^2 = .008; R^2_{change} = .006; F = 4.583^{***}$					
SNb	APE course	-.720	-.026	-1.203	.229
	Special Education course	.967	.011	.502	.616
	Teaching quality	5.576	.033	1.563	.118
	Teaching competency	4.614	.061	2.886**	**.004**
$R = .078; R^2 = .006; R^2_{change} = .004; F = 3.484^{**}$					
PBCb	APE course	.530	.044	2.030*	**.042**
	Special Education course	-.436	-.011	-.518	.604
	Teaching quality	.135	.002	.087	.931
	Teaching competency	-.743	-.022	-1.066	.287
$R = .048; R^2 = .002; R^2_{change} = .001; F = 1.326^{n.s.}$					

n. s. $p > .05$; * $p < .05$; ** $p < .01$; *** $p < .001$

To examine the relationships among demographic variables (i.e., APE course, Special Education course, teaching quality, and teaching competency) and TPB measures, Enter multiple regression analyses were conducted. Table 4.15 presented the summary of regression coefficients. Results indicated that I (intention), ATB (attitude toward the behavior), SN (subjective norm), and SNb (normative beliefs) were predicted by teaching competency. Ab (behavioral beliefs) and PBCb (control beliefs) were predicted by APE course. But, PBC (perceived behavioral control) were not predicted by any demographic variables and Special Education course and teaching quality could not predict any TPB measures in current study. So, adapted physical education and teaching competency were important predicators of the TPB measures for Chinese preservice physical educators. Therefore, Ha 4 was further confirmed.

4.7.7 Relationships among TPB measures

To study the relationships among TPB measures, the prediction of three direct and three indirect effects on intention, and the adequacy of the estimated model, the author used χ^2/df, the root mean square error of approximation (RMSEA), the comparative fit index (CFI), the Tucker-Lewis coefficient (TLI), and the standardized residual (SRMR).

The author determined good model fit if the χ^2/df smaller than 5, and the CFI and TLI is greater than .90 as recommended by Salisbury et al. (2002). For the RMSEA and SRMR, values less than .08 represent an acceptable fit (Byrne, 2013).

Structural modeling technology was used to examine the proposed associations among study variables (see Figure 4.5 for details) with Mplus Version 7.0. Both the direct and indirect effects were computed. Indirect effects were assessed using bootstrapping methods. The proposed model has a good fit to the data: $x^2/df = 7.86$; CFI = 0.980; TLI = 0.955; RMSEA =0.055, 95% CI [.044, .066]; SRMR = 0.028.

4.7.7.1 Descriptive statistics of TPB measures

Table 4.16 showed descriptive statistics including means, standard deviations, and bivariate correlations for TPB measures in the questionnaire used in this study. Attitude of behavior,

subjective norm, perceived behavioral control, behavioral beliefs, and normal beliefs were significantly correlated with intention and self-reported behavior. Intention was significantly correlated with self-reported behavior.

Table 4.16 Bivariate correlations, means, and standard deviations of TPB measures

	1	2	3	4	5	6	7	8	Mean	SD
1. I		.620**	.537**	.233**	-.101**	.475**	.019	.252**	5.86	1.24
2.ATB			.537**	.119**	-.238**	.439**	-.136**	.199**	5.29	1.18
3. SN				.268**	-.011	.494**	.043**	.190**	5.36	1.29
4.PBC					.286**	.242**	.277**	.092**	4.65	1.13
5. Ab						.003	.528**	-.072**	39.99	27.42
6.SNb							.091**	.202**	164.81	65.75
7.PBCb								.016	50.84	28.63
8. SRB									1.77	.42

* $p < .05$; ** $p < .01$. N = 2305. I = intention; ATB = attitude toward the behavior; SN = subjective norm; PBC = perceived behavioral control; Ab = behavioral beliefs; SNb = normative beliefs; PBCb = control beliefs; SRB = self-reported behavior.

Furthermore, behavioral beliefs were significantly correlated with attitude toward the behavior, normal beliefs were significantly correlated with subjective norm, and control beliefs were significantly correlated with perceived behavioral control. However, control beliefs were not significantly correlated with intention and self-reported behavior, behavioral beliefs were not significantly correlated with subjective norm and normal beliefs.

4.7.7.2 Predicting intention and self-reported behavior

According to the model, overall, 46.9% and 6.4% of the variance in preservice physical educators' intentions and self-reported behaviors toward teaching students with disabilities was explained by the relevant predictors, respectively.

The paths among the study variables with standardized estimates were shown in Figure 4.5. Behavioral attitude (ATB) fully mediated the relationship between behavioral belief and preservice physical educators' intentions toward teaching students with disabilities in their physical education classes (β = .072, 95% CI [.054, .089], $p < 0.001$).

Behavioral attitude, subjective norms, and perceived control were significantly related to intentions (*β=.428, p<.001; β=.202,p<.001;.and β=.089, p<.001, respectively)*. Behavioral

attitude (ATB) partially mediated the relationship between normative belief (SN_b) and intentions (β = .100, 95% CI [.076, .123], p < 0.001), as there is a direct effect from normative belief (SN_b) to intentions (β = .167, p < 0.001). Behavioral attitude (ATB) fully mediated the association between control belief (PBC_b) and intentions (β =- .047, 95% CI[-.064, -.031], p < 0.001).

Subjective norm (SN) partially mediated the relationship between normative belief (SN_b) and intentions (β = .100, 95% CI [.076–.123], p < 0.001), as there is a direct effect from normative belief (SN_b) to intentions (β = .167, p < 0.001).

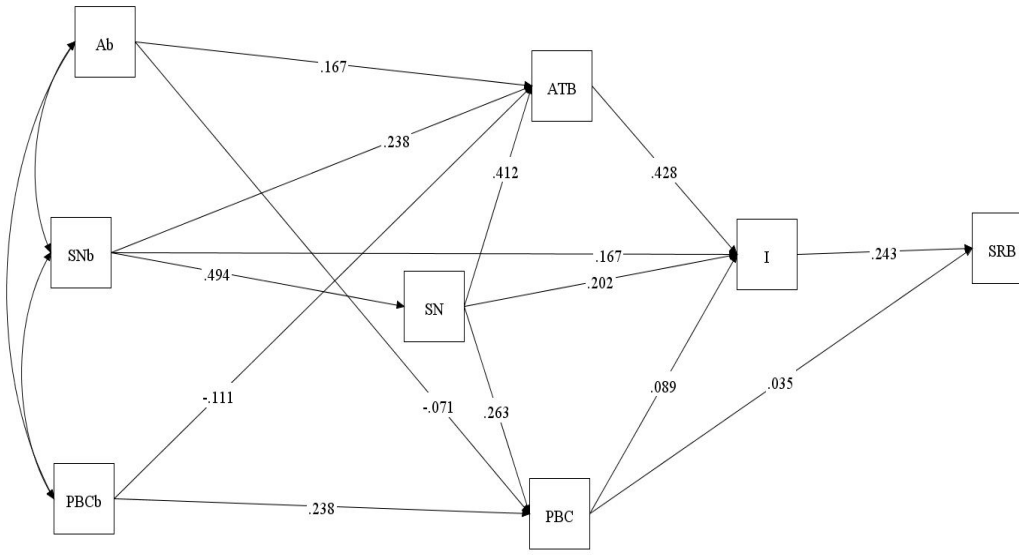

Figure 4.5 The TPB model in current study

Note: I = intention; ATB = attitude toward the behavior; SN = subjective norm; PBC = perceived behavioral control; Ab = behavioral beliefs; SNb = normative beliefs; PBCb = control beliefs; SRB = self-reported behavior.

Behavioral attitude (ATB), subjective norm (SN), and perceived behavioral control (PBC) influence preservice physical educators' self-reported behaviors (SRB) via the mediating role of intentions (β = .104, 95% CI [.084–.124], p < 0.001; β = .049, 95% CI[.035–.063], p < 0.001; β = .043, 95% CI[.026–.061], p < 0.001, respectively), and but the direct path from perceived behavioral control(PBC) to self-reported behaviors (SRB) is not significant (β

= .035, p >.05), suggesting that perceived behavioral control(PBC) is indirectly related to self-reported behaviors (SRB) with the mediating effect of preservice physical educators' intentions (β = .043, 95% CI[.026–.061], p < 0.001).

Perceived behavioral control (PBC) fully mediated the relationship between behavioral belief (A_b) and intentions (β =- .006, 95% CI [-.011, -.002], p <.01). And perceived behavioral control (PBC) fully mediated the relationship between control belief (PBC_b) and intentions (β = .021, 95% CI [.013–.030], p < 0.001).

According to the analysis on the TPB model above, the Ha 2 and Ha 3 were proved. In the current study, Chinese preservice physical educators' intention toward teaching students with disabilities was not only directly determined by their attitude toward the behavior, subjective norm, and perceived behavioral control, but also indirectly determined by their behavioral beliefs, normative beliefs, and control beliefs. Additionally, Chinese preservice physical educators' perceived behavioral control was indirectly related to their self-reported behavior with the mediating effect of their intention toward teaching students with disabilities.

4.8 Discussions

The questionnaire survey investigated the current situation of Chinese preservice physical educators' intentions toward teaching individuals with disabilities, assessed their attributes associated with their intentions, and tested the TPB model. 2305 Chinese preservice physical educators including four grades from 10 universities in three different regions (i.e., Eastern, Central, and Western) were surveyed using the PEITID-III to collect their demographic information, education background and teaching experience toward individuals with disabilities, to assess the independent and collective contributions associated with positive intentions, and to test the appropriateness of the TPB theory and the instrument of PEITID-III in China to evaluate preservice physical educators.

4.8.1 Demographic measures

4.8.1.1 Gender

There were no significant differences between genders on age, the number of special education course, the number of month in teaching individuals with disabilities, and teaching quality and competency toward teaching individuals with disabilities. But, Males had significantly more adapted physical education experience than females.

4.8.1.2 Region

According to the data, regions were related to the demographic measures of preservice physical educators. More concretely, preservice physical educators from Central China were the youngest of the three regions, preservice physical educators in Eastern China had learned the least adapted physical education course and special education course, but preservice physical educators in Central China had learned the most special education course, preservice physical educators in Central China reported the highest quality in teaching students with disabilities, and preservice physical educators in Eastern China reported the highest competency toward teaching students with disabilities.

4.8.1.3 Professional preparations

The experience of learning adapted physical education and special education course, teaching students with disabilities, and contact with close friends whom has a disability was significantly related to Chinese preservice physical educators' teaching quality and teaching competency toward students with disabilities. Specifically, the teaching quality of preservice physical educators who had learned adapted physical education and special education course were better than that of preservice physical educators who had not learned adapted physical education and special education course, the teaching quality and teaching competency of preservice physical educators who had the experience of teaching students with disabilities were significantly better than that of preservice physical educators who had no experience of teaching students with disabilities. The teaching quality and teaching competency of preservice physical educators who had the experience of contact with close

friends who has a disability was significantly better than that of preservice physical educators who had not the experience. In fact, maybe the experience of contact with close friends who has a disability in preservice physical educators past life may influence the whole professional preparations toward teaching students with disabilities. In current study, preservice physical educators who had the experience of contact disabilities had significant more adapted physical education courses, special education courses, reported better teaching quality and teaching competency toward students with disabilities than preservice physical educators who had not that experience did (see Table 4.17).

Table 4.17 Results of descriptive statistics and T test on Contact disabilities in different demographic measures

Do you have any close friend with a disability?	Category	M ± SD	t	p
APE courses	Yes (n = 302)	1.33 ± 2.40	**2.435***	**.015**
	No (n = 2003)	.97 ± 2.35		
Special Education courses	Yes (n = 302)	.31 ± 1.12	**2.687****	**.008**
	No (n = 2003)	.13 ± .67		
Teaching quality	Yes (n = 302)	1.13 ± .54	**2.113***	**.035**
	No (n = 2003)	1.06 ± .37		
Teaching competency	Yes (n = 302)	2.51 ± .81	**3.959*****	**.000**
	No (n = 2003)	2.30 ± .87		

n. s. $p > .05$; * $p < .05$; ** $p < .01$; *** $p < .001$

On the whole, more attention should be given to the training of preservice physical educators on the knowledge of inclusive physical education and special education. Up to 75.4% Chinese preservice physical educators had not taken any adapted physical education courses, 92.5% Chinese preservice physical educators had not taken any special education course, and 96.0% of them had no any experience in teaching students with disabilities. This situation, in turn, would likely result in their lower teaching quality and teaching competency toward students with disabilities. On the measures of adapted physical education course, special education course and month in teaching, the Eastern region performed poor although it was the best on the economy in China. Obviously, universities in China should set up courses of adapted physical education and special education for

preservice physical educators in order to promote their ability in teaching students with disabilities in their general physical education classes in future.

4.8.2 The influence of demographic measures on TPB measures

4.8.2.1 Professional preparations

An important finding in this study was that Chinese preservice physical educators' teaching competency and adapted physical education course had significant positive influence on most TPB measures. Specifically, teaching competency had significant positive influence on intention, attitude toward the behavior, subjective norm and normative beliefs, and adapted physical education course had significant positive influence on behavioral beliefs and control beliefs. Preservice physical educators with more competencies toward teaching students with disabilities tended to positively value the performance to teach students with disabilities, and easily to feel the normative expectations of others and perceive more social pressure, and these in turn leaded to their stronger teaching intention toward students with disabilities. Preservice physical educators who had learned more adapted physical education course tended to have more beliefs about their teaching behavior toward students with disabilities, and feel more power to control the factors about the teaching behavior.

Apparently, attitude toward the behavior is the most important effect not only in the Theory of Planned Behavior but also in its former theory of reasoned action. The result in this study that teaching competency had a significant positive influence on attitude supported findings in prior literature. For instance, Downs and Williams (1994) reported that when perceived competence was lower, attitudes toward teaching students with disabilities in general classes were less favorable. Heikinaro-Johansson and Sherrill (1994) also stressed that a lack of perceived competence was considered a major obstacle to inclusion. Contrary, the more competency educators felt, the more favorable their attitudes (Kowalski & Rizzo, 1996). Based on the theory of reasoned action, many researchers reported that physical educators with higher perceived teaching competency were more likely to be favorable attitude toward teaching students with disabilities (Block & Rizzo, 1995b; Heikinaro-Johansson & Sherrill, 1994; Obrusnikova, 2008; Rizzo & Vispoel, 1991; Rizzo & Wright, 1988b; Schmidtgotz et al., 1994; Tripp & Rizzo, 2006).

Also, the finding that perceived teaching competence had a significant positive influence on their intention toward teaching students with disabilities has partially supported the research of Oh et al. (2010), which reported that previous experience teaching individuals with disabilities and its corollary perceived competence had a significant positive influence on intentions and perceived behavioral control. This finding was supported by many past researches (Columna et al., 2016; Downs & Williams, 1994; Kowalski & Rizzo, 1996; Obrusnikova, 2008; Rizzo & Vispoel, 1991; Rizzo & Wright, 1988b; Tripp & Rizzo, 2006) indicating that higher perceived teaching competence associated with more favorable intentions. But, the influence of perceived competence on attitude and intentions was working together with teaching experience in many past studies. This trend was apparent in the further ANOVA analysis of the relationship among perceived competence, teaching experience, attitude and intentions, although the significant influence of teaching experience on attitude and intentions was not found in this study.

Another important finding in this study was that perceived competence also predicted normative beliefs and subjective norms. This finding implicated that the perceived competence maybe could positively influence the sensitivity of preservice physical educators perceiving the behavioral expectations from other people, which in turn positively may strengthen their confirmation to engage the behavior and result in positive intentions toward teaching students with disabilities. But this result has not been confirmed in prior studies.

The result that adapted physical education course had significant influence on preservice physical educators' behavioral beliefs and control beliefs on teaching students with disabilities also was found in this study. This meant that preservice physical educators who had learned more adapted physical education course tended to had more knowledge and teaching abilities related to students with disabilities, and to feel more control powers of factors. This result was consistently with prior findings (Block & Obrusnikova, 2007; Hodge & Jansma, 1998; Oh et al., 2010; Pedersen et al., 2014; Tripp & Rizzo, 2006) that courseworks are essential in developing the building block of favorable intentions. In current study, two building blocks, behavioral beliefs and control beliefs, were found.

In the past research, professional preparations related to attitude and intentions of preservice physical educators toward teaching students with disabilities including teaching experience and competence, adapted physical education and special education course, and experience of contact with individuals with disabilities were emphasized. Findings of current study also provided support for this view. By comparing the differences of TPB measures between preservice physical educators who had coursework, teaching and contacting experience and preservice physical educators who had not that experience, the T test results indicated that the score of all TPB measures of preservice physical educators who had that experience were higher than that of preservice physical educators who had not that experience, and this difference on many measures were statistically significant. Despite of this, our study found that no any demographic variables predicted perceived behavioral control. Maybe the participants had not enough teaching experience and ability and got enough knowledge about students with disabilities, and result in their helplessness on controlling factors. This implicated that professional preparations for Chinese preservice physical educators toward teaching students with disabilities is very necessary and urgent practical problems.

4.8.2.2 Region

The influence of region on intention and its three direct components was significantly. The mean score of intention, attitude, subjective norm and norm beliefs of preservice physical educators from Central China were significantly higher than that of preservice physical educators from Western and Eastern China. The result may be attributed to the relatively higher score of preservice physical educators from Central China on adapted physical education and special education course, the time and quality of teaching experience, according to the ANOVA analysis. Further investigation indicated that all of the universities from Central China in this study had set up elective course related to adapted physical education and special education.

4.8.2.3 Grade

The influence of grade on intention and its components was significantly, too. First grade preservice physical educators had the highest score on intention, attitude toward the

behavior, subjective norms and norm beliefs followed by second grade, fourth grade and third grade. The result provided support for the research of Martin and Kudláček (2010) , who reported the fourth year physical education students had not positive attitude than the first year physical education students although they had a higher rate of completion of a university course related to students with disabilities, and had increased practical experience in schools and overall teacher preparation than first year students. Another finding also reported that younger teachers and teachers with fewer year experiences held more positive attitudes towards inclusion than their older, more experienced peers did. A possibility reason is that the first and second year preservice physical educators may hold an over optimism for teaching students with disabilities, due to lack of awareness and relevant experiences. But for the third and fourth grade preservice physical educators, they had learned some courses of adapted physical education or special educations, hold some ideas about students with disabilities, accumulated some teaching experience of them, even felt good when they teaching students with disabilities, but all these maybe give them a negative attitude and bad experience about teaching students with disabilities. The further ANOVA analysis supported this possibility. The fourth grade preservice physical educator had the strongest behavioral beliefs and control beliefs, contrarily, the first grade preservice physical educators' behavioral beliefs and control beliefs was the lowest among all grades.

4.8.2.4 Gender

The influence of gender on TPB measures was obvious in this study. There were no statistically significant differences on intention and attitude between male and female Chinese preservice physical educators. This finding was consistent with most of past studies (Doulkeridou et al., 2011; Duchane & French, 1998; Y. Liu et al., 2012; Rizzo & Vispoel, 1991; Tripp, 1988) , which showed no link between educator's gender and their attitude toward teaching students with disabilities in general physical education classes. But on measures of subjective norm, behavioral beliefs, normative beliefs and control beliefs, the difference was statistically significant, and the scores of males were higher than those of females. Maybe the three building blocks contributed a little higher intention of male than that of female. The reason maybe also attributes to coursework, teaching experience or teaching competence. In this study, T test indicated that male preservice physical educators

had learned more adapted physical education course and special education course and felt more teaching competency than female preservice physical educators did.

4.8.3 Intention of Chinese preservice physical educators

The investigation indicated that Chinese preservice physical educators' intention toward teaching students with disabilities was very positive ($M = 5.84 > 4.00$). But in fact, this positive intention was based on the unrealistic, optimistic, idealized imagination of them toward teaching students with disabilities in the future. Because they lacked understanding about individuals with disabilities, had not formed knowledge and capacity structure related to adapted physical education and special education, had not experienced educational practice toward teaching students with disabilities, and their nagative behavioral beliefs, normative belief and control beliefs on teaching students with disabilities.

Firstly, all participants in this study were born between 1995 and 2000, the time that the program called LRC (Learning in Regular Classroom) in China just on its initial stage. Almost no general schools accepted students with disabilities, but they could go to special schools. For the participants, they almost had no chance to contact students with disabilities throughout their elementary, secondary and high school life. So they had not accaculated the basic communication techniques with students with disabilities.

Secondly, the cultivation of preservice physical educators' educational ability toward teaching students with disabilities is still ignored in current construction of knowledge system and curriculum system. There was no any adpated physical education course and special education course in their major courses of the Physical Education Major training program of the bachelor's degree in China. There were only 4 universities set up adpated physical education course and special education course as elective course in 10 universities related to this study. So, in the current study, more than 75% participants reported that they had not taken any Adapted Physical Education courses, and more than 90% participants reported they had not taken any Special Education course.

Thirdly, preservice physical educators seldom have the chance to teach students with disabilities even during the period of practicum. There are at least two reasons. One is that

preservice physical educators' practicum just have one semester (16 weeks) during their four academic years. Another is that their practicum school normally unwill let preservice physical educator to teach the class which has students with disabilities for security reason. Add up the first and second, the three reasons led to preservice physical educators' low perceived behavioral control (M = 4.65) toward teaching students with disabilities.

Finally, the score of Chinese preservice physical educators' beliefs were low, too (See Table 4.18). Low beliefs can not lead to behavior. According to the Theory of Planned Behavior, human behavior is guided by behavioral beliefs, normative beliefs, and control beliefs. These three beliefs produce a favorable or unfavorable attitude toward the behavior, subjective norm and perceived behavioral control respectively, and in combination lead to the formation of a behavioral intention (Ajzen, 2006). Therefore, beliefs are the building blocks for the formation of attitudes toward the behavior, subjective norms, perceived behavioral control and behavioral intentions. In other words, peoples' intentions and behaviors take account of and are consistent with their beliefs no matter how the beliefs originated (Ajzen & Dasgupta, 2015). Therefore, the high and positive intentions of Chinese preservice physical educators were unrealistic. Especially the score of behavioral beliefs and control beliefs which lower than their median score respectively, represented their lack and deficency on professional preparation toward teaching students with disabilities.

Table 4.18 Results of descriptive statistics on the TPB measures

Measure	N	Minimum	Maximum	Median	Mean ± SD
I (Intention)	2305	1	7	4.00	5.86 ± 1.24
ATB	2305	1	7	4.00	5.29 ± 1.18
SN	2305	1	7	4.00	5.36 ± 1.29
PBC	2305	1	7	4.00	4.65 ± 1.13
Ab	2305	3	127	65.00	39.99 ± 27.42
SNb	2305	6	294	150.00	164.81 ± 65.75
PBCb	2305	3	147	75.00	50.84 ± 28.63
SRB	2305	1	2	1.50	1.77 ± .42
valid N (listwise)=	2305				

Obviously, it is a really problem that preservice physical educators hold positive intentions toward teaching students with disabilities and have poor professional preparations related to teach students with disabilities at the same time. Because of the foundational status of beliefs for behavioral intention, Chinese preservice physical educators' beliefs and attitudes should be changed.

Many past studies emphasized the importance of professional preparations, including course work, teaching experience and teaching competencies to change preservice physical educators' attitudes toward teaching students with disabilities. So, in order to cultivate the knowledge structure and teaching abilities related to students with disablilities of preservice physical educators, Chinese universities should carry out a new training program including many aspects, not only in curriculum and lectures but also in adapted physical education class observation and teaching practicum.

So, in next part of this study, it will be certify that preservice physical educators' intention especially the beliefs and attitudes toward teaching students with disabilities can be positively influenced by a mid-term adapted physical education training program.

4.8.4 Components of the Theory of Planned Behavior

Results from the current study indicated that three direct measures of the Theory of Planned Behavior predicted Chinese preservice physical educators' intention toward teaching students with disabilities. Many previous research found the similar results on three direct measures (Conatser, Block, & Gansneder, 2002; M Jeong & Block, 2011; Kudláček et al., 2002; Martin & Kudláček, 2010; Oh et al., 2010). M Jeong and Block (2011) examined secondary school physical educator's beliefs and intentions toward teaching students with disabilities in Korea, and found all three TPB components were significant predictors of intention, and direct measures explained 35.4% and indirect measures explained 44.3% in variance respectively. Conatser et al. (2002) investigated aquatic instructors' beliefs about teaching swimming to individuals with mild and severe disabilities in inclusive settings, and found three variables were significant predictors for intention to include individuals with severe disabilities, explaining up to 62% of the total variance in intention. In the

research area of health and physical activity, previous research have also reported higher predictability of intention by three components of the TPB theory, such as 45% (Hagger, Chatzisarantis, & Biddle, 2002), 49% (Norman, Conner, & Bell, 1999) and 42% (Sheeran & Taylor, 1999). Compared with those findings, the explaination in variance of three direct indicators of the TPB in intention of current study was good. This implicited that the instrument of PEITID-III was suitable to be applied among Chinese preservice physical educators.

According to TPB, behavioral beliefs produce a favorable or unfavorable attitude toward the behavior, normative beliefs result in perceived social pressure or subjective norm, and control beliefs give rise to perceived behavioral control (Ajzen, 2006). Therefore, attitude, subjective norm and perceived behavioral control should be predicted by behavioral beliefs, normative beliefs and control beliefs, respectively. In the present study, three direct measures were all predicted by three indirect measures, respectively. In addition, attitude was predicted by all three indirect measures including behavioral beliefs, normative beliefs, and control beliefs. Perceived behavioral control was predicted by control beliefs and behavioral beliefs. All of these cross and comprehensive influence of beliefs on direct measures will interfere the intention-behavior relation. Ajzen (1985) considered "a person's behavioral and normative beliefs are subject to change as events unfold and new information becomes available. Such changes may influence the person's attitude toward the behavior or his subjective norm and , as a result, produce a revised intention." Therefore, in the current study, control beliefs could indirectly influence intention and change intention-behavior relation via its direct link to attitude and perceived behavioral control. In the same vein, behavioral beliefs could indirectly influence intention via its direct link to attitude and perceived behavioral control and, normative beliefs could indirectly influence intention via its direct association with subjective norms and attitude.

4.8.5 Examination of self-reported teaching behavior

In current study, preservice physical educators' self-reported behavior toward teaching students with disabilities was significantly predicted by their intention and perceived behavioral control respectively, and their perceived behavioral control could predicate their

self-reported behavior by the full mediating role of intention. This finding was consistent to the assertion of Ajzen (1991) that the effect of perceived behavioral control on behavior is completely mediated by intention, and that intention in turn is the immediate antecedent of goal-directed behavior. Hence, in present study, Chinese preservice physical educators' perceived behavioral control influenced their self-reported behavior via their intention toward teaching students with disabilities, and also it predicted their self-reported behavior directly at the same time(Tant & Watelain, 2016)(Tant & Watelain, 2016)(Tant & Watelain, 2016)(Tant & Watelain, 2016)(Tant & Watelain, 2016).

4.9 Conclusion

This chapter investigated the current situation of Chinese preservice physical educators' intention toward teaching students with disabilities, and examined the applicability of Ajizen's TPB and the questionnaire of PEITID in China by collecting data of 2305 participants from 10 universities that located in Eastern, Central, and Western China.

On the whole, Chinese preservice physical educators' intention toward teaching students with disabilities was positive, and their self-reported behavior toward teaching students with disabilities was positive, too.

The applicability of TPB in current study was good. Chinese preservice physical educators' intention toward teaching students with disabilities was predicted by its three direct measures (attitude toward the behavior, subjective norms, and perceived behavioral control) and three indirect measures (behavioral beliefs, normative beliefs, and control beliefs). Chinese preservice physical educators' self-reported behavior toward teaching students with disabilities was predicted by their intentions and perceived behavioral control, too.

Compared with the TPB model of Ajzen, the TPB model in current study presented more prediction paths. Preservice physical educators' behavioral beliefs indirect predicted their intention toward teaching students with disabilities not only fully mediated by attitude of behavior but also fully mediated by perceived behavioral control. Normative beliefs indirect predicted intention not only partially mediated by subjective norms but also partially mediated by attitude toward the behavior. Control beliefs indirect predicted intention not

only fully mediated by perceived behavioral control but also fully mediated by attitude toward the behavior. Perceived behavioral control was indirectly related to Chinese preservice physical educators' self-reported behavior with the mediating effect of their intention toward teaching students with disabilities. This point was consistent with Ajzen's TPB model. For the attributes of Chinese preservice physical educators' intention and self-reported behavior toward teaching students with disabilities, the effect of their grade, region, and professional preparations were significant, but the effect of their gender and contact experience with disabilities were not significant.

But the author hold that Chinese preservice physical educators' positive intention and self-reported behavior toward teaching students with disabilities was not reality because of their lower behavioral beliefs and control beliefs. The reason that resulted in their lower control beliefs was that the lack of their professional preparation. The reason that caused their lower behavioral beliefs perhaps was that they had prejudice on students with disabilities. Therefore, it is necessary to investigate preservice physical educator's implicit attitude toward students with disabilities. Because implicit attitude is "introspectively unidentified (or inaccurately identified) traces of past experience that mediate favorable or unfavorable feeling, thought, or action toward social objects" (Greenwald & Banaji, 1995), and it is stable and not affected by the social desirability effect. The implicit attitude can reflect preservice physical educator's prejudice on students with disabilities.

So, in the next chapter, an experimental research was conducted to examine the situation of preservice physical educators' implicit attitude toward students with disabilities and the possibility to change their implicit attitude toward students with disabilities by accepted a mid-term adapted physical education training program.

Chapter 5: Interview

5.1 Introduction

In order to determine the factors influencing preservice physical educators' teaching behavior towards students with disabilities, the qualitative method was applied to examine whether the attitudes, subjective norms, and perceived behavioral control in TPB were sufficient to examine the potential determinants of intention of them.

As the most widely used method of data collection in educational research, interviews have many advantages such as, people are more easily engaged in them and fewer problems failing to respond, in-depth probe answers of the respondent, and to pick up non-verbal cues etc. (Anderson & Arsenault, 1998).

5.2 Method

5.2.1 Theoretical framework

In this part of study, Ajzen's (1991) Theory of Planned Behavior still was chosen as the theoretical basis. In addition to the quantitative data, qualitative analysis provided an in-depth understanding of participants' intentions toward teaching students with disabilities. Fourteen Individual interviews were chosen for interviews providing more complete information than questionnaire (Burke Johnson & Christensen, 2013; Mcmillan & Schumacher, 2010). As stated by Johnson and Christensen (2000), interviews usually were taken within 40 minutes. Therefore, this study enrolled 14 individuals including 7 female and 7 male, and each individual interview last from 15-25 minutes. All of 14 interviewees were asked questions in a similar way. Data were gathered by semi-structured interviews, analyzed and shown as descriptive summaries by content analysis (Patton, 2002).

5.2.2 Participants and Settings

Convenience sampling was developed in this study to draw on the lived experiences of pre-service physical educators. Fourteen pre-service physical educators were selected

following the analysis of the quantitative data in questionnaire survey. These student teachers were in their second year of Bachelor teacher education. After the questionnaire survey, I asked survey respondents of Southwest University to provide their contact information if they would be willing to be interviewed. 20 volunteer participants were contacted by phone to request a follow-up interview. Fourteen participants of them responded and agreed with face to face interviews.

Based on the Theory of Planned Behavior, the semi-structure interviews (Patton, 2002) were employed from among the participants to examine the teaching intentions of preservice physical educators during data collection. All interviews were conducted in the teacher's office. The interviews were recorded using an audio recording device with the consent of the interviewees. The interviews were conducted in Chinese for the first language of interviewee is Chinese. The recordings were transcribed to facilitate coding. Interviewees were asked questions that extend from the questionnaire PEITID-III which were reviewed by the researcher. The semi-structured interview included the same questions to all participants, so there were no differences in interview outcomes. The interviews took place before the participants were training on Adapted Physical Education.

The same semi-structured questions based on the TPB were used to guide interviews. They were complemented by the follow-up showed on Table 5.1. To encourage interviewee contributions, active listening techniques were used throughout the interviewing procedure.

Table 5.1 Preservice physical educator interview guide

(1) What is your intention to teach a student with disability in your class? Why?
(2) What factors will be considered when you carry on your class include a student with disability?
(3) Can you predict your behavior on teaching student with disability in your class?
(4) Which people around (e.g., principals, family members, colleagues, friends, students, etc.) will affect you to decide to teach a student with disability?
(5) To what degree are you motivated to comply with how others consider you to teach a student with disability? Why?
(6) How confident do you believe you would have in teaching a student with disability?
(7) Can you describe your opinion on teaching student with disability in your class?
(8) What factors affect your ability to teach a student with disability in your class?

5.2.3 Procedure

At the beginning of all interviews, the author showed the same pictures to interviewees that students with disability participating adapted physical education which copied from "*Adapted Physical Activity, Recreation, and Sport: Crossdisciplinary and Lifespan"*(Claudine Sherrill, 2004) and "*Adapted Physical Education and Sport"*(Winnick, 2011). The interview guide (see Appendix D for a list of open-ended interview topics) was designed based on TPB to catch the preservice physical educators' (a) behavior intention (Questions 1), (b) attitude (Questions 3, 7), (c) subjective norms (Questions 4, 5) and (d) perceived behavioral control (Questions 2, 6, 8).

The interview guides were submitted to a panel of five experts in adapted PE (i.e. PE which may be adapted or modified to address the individualized needs of children and youth with special needs) and GPE to test the content validity. The interview guide was modified based on the feedback of panelists. For example, we added some examples such as principals, colleagues, students with disabilities, and parents of students with disabilities to explain "others" mentioned in the interview questions.

5.2.4 Data collection

The results of the survey were evaluated to determine which participants were further studied by semi-structured interviews. Volunteers were invited to participate in the interview process. Interview questions were utilized to obtain greater depth of information. The interview guide can be found in Appendix D. To ensure there is sufficient time and comfortable settings for interviews carrying on, before the interviews, the volunteers were contacted by phone call to determine the date, detailed time, and location of interviews and to avoid interfering with the teaching schedules or other important things of participants.

According to Anderson & Arsenault (1998), each interview lasted about 20 minutes and was conducted in a quiet, uninterrupted office in this study, in addition, the interviewees were asked to power off cell phone and hold other interruptions. Due to time and geographic distance, interviews were conducted face to face with pre-service PE teachers of Southwest University. All interviews were recorded using a recorder, which allows the

conversation to be subsequently transcribed. Additionally, to record the pre-service PE teachers' response exactly as stated on a specially prepared interview form during the interviews.

5.2.5 Data analysis and trustworthiness

The interviews were transcribed and the observation notebook was reviewed for additional data, and as a method to triangulate the data. Together these were analyzed using the deductive content method.

Qualitative data analysis was an ongoing process during data collection. After each interview, the author transcribed the data, referred to my field notes and reflected on the content. Any insights gained from this activity were recorded in my notes. Participants were provided with the transcripts to check that the content recorded corroborates with their intended meaning.

The author began the coding process by carefully reading transcribed data along with listening to recorded interviews and analyzing the data for meaningful concepts. And then the author created a list of categories based on the Theory of Planned Behavior to help analyze the transcripts based on three broad constructs of the research questions.

5.3 Results

5.3.1 Basic information of participants

Among the fourteen second-year preservice physical educator interviewees, five have study experiences with classmate with disability; six interviewees have neighbor or relatives with disabilities; and three participants had no contact experiences with individuals with disabilities. All participants have not adapted physical education or other special physical education curriculums, but few seminars related to the field.

Table 5.2 Demographic data of participants

Participant	Age	Province	Contact experience
M1	19 years	Shaanxi	Neighbor with disabilities
M2	19 years	Chongqing	No

M3	21 years	Yunnan	Neighbor with disability
M4	20 years	Chongqing	Relatives with disabilities
M5	20 years	Sichuan	Classmate with disability
M6	20 years	Chongqing	Brother with disability
M7	20 years	Anhui	No
F1	22 years	Chongqing	Neighbor and brother with disabilities
F2	19 years	Hunan	Classmate with disability
F3	19 years	Guangxi	Neighbor with disability
F4	18 years	Guizhou	Classmate with disability
F5	22 years	Ningxia	Classmate with disability
F6	20 years	Guangxi	Classmate with disability
F7	19 years	Chongqing	No

5.3.2 Attitudes

Participants expressed their complex feeling toward teaching a student with disability who labeled ADHD participating in their physical education class.

Five interviewees expressed their positive attitude toward teaching a student labeled ADHD (F2, F3, M5, M2, M7).

> *"I would like to teach her very much. Since the school has arranged for her to take part in PE class, then she is my student. I will teach her something that she interested in and gives her a lower standard when it comes to the examination." (Interviewee: F2)*

> *I would like to teach her. But I am also considering about his psychological and physical endurance. If she wants to learn but her body condition is not permitted, I'll try to choose what she can play and try to get her involved." (Interviewee: F3)*

> *"Every students are equal, I will do some adjust properly, as far as possible to give exercise chance to each student, and I will take care of the true feelings of student with disability psychologically, so I will not put her aside in my class." (Interviewee: M2)*

"No matter what's the teaching content of a class, there is always a part he can take part in. Anyway, I won't put her on aside in my class. I will try to let the peers play with her, so she will have a sense of team belonging." (Interviewee: M5)

"I will design games adapted to her. Because I think physical activity can promote the emotional contact between students. She can communicate with her classmates more in my physical education classes." (Interviewee: M7)

However, six（F4, F5, F6, M4, M3, M6）interviewees expressed they would not intend to teach students with disabilities for considering those students feelings while participant in PE class with others. However, they hope to teach them if they like to learn first.

"I hope my class is better without such a student." (Interviewee: M3)

"Certainly, I am not willing to teach students with disability in my class, after all, it is very difficult for me, and I have limited capacity to teach them." (Interviewee: M4)

"I don't think this kind of students should be sent to the regular school. They should be sent to the special school." (Interviewee: M6)

"I don't want to teach."(Interviewee: F5)

"I think I will not teach him (or her). I have few chance to teach him (or her), but I will think about his (or her) category and degree of disability. I will teach the student except for him or her with a mild mental disability. (If the student with a severe disability in my class) I cannot imagine what situation my physical education class will be. The teaching must be very difficult to carry on. She cannot do well in group collaboration activities, and other students will blame her. This situation will stop her to attend my physical education class again. I don't know how to do about this and how to help her enjoy in my class. This is a problem for me." (Interviewee: F6)

"I will not teach him (or her), but if he (she) would like to join us first, I will teach. In fact, I think it is not pprobable for him (her) to participate in PE class especially in middle school because of our big culture background. I think there is a big difficult

for him (her) to join in PE class."(Interviewee: F4)

"I think I will not teach the student with disability except he (or she) can keep up with my class. I don't want to hurt his (her) self-esteem by stand-by in my class."(Interviewee: M3) The other participants also expressed the same feelings more or less.

During the whole interviews, some interviewees (F1, F7, M1) expressed their complex feelings. On the one hand, they will teach the students with disabilities in their PE class, on the other hand, they would rather these students not to be divided into their classes. Besides, some of the different understanding of disability, some are not willing to teach students with physical disabilities, others are not willing to teach mental and other disabilities. But all of them intend to teach if students with mild disabilities.

"I'd like to teach her, but it will be very difficult for me. The biggest problem for me is that I don't know how to guarantee her safety during my teaching process. Discrimination and isolation from classmates will lead to her refusal to communicate with people including me. I don't know how to change this situation." (Interviewee: F1)

"I'd like to teach him (her), but I am not sure whether I will give up him (her) in the course for some reasons, such as too many difficulty or I feel too tired to teach her."(Interviewee F7)

"I'd like to teach her. But the first thing I am afraid is that her class adviser and my headmaster will forbid me to teaching her because of some so-called safety problems. Then about her self-opinion I think she can do well on some activities or movement skills, but she will give it up. If I let her do it again and again, I am afraid that she thought it was deliberately embarrassing her. So, it is very hard to deal with it." (Interviewee: M1)

"Although I don't want to teach her, if she is with a mild mental disability, maybe I will teach her, but except with physical disability." (Interviewee F5)

5.3.3 Subjective norms

In TPB, subjective norm means the perceived social pressure to engage or not to engage in a behavior (Ajzen, 1991). For participants in the study, their perceived social pressure related teaching students with disabilities came from peoples around them including their friends, physical education teachers, colleagues, headmaster, parents of students with disabilities, misunderstanding of people around them, and inclusive environment of school.

Two male and two female participants (interviewee F7, F5, M2, M3) emphasized the influence of friends. Female interviewees paid special attention to the misunderstanding on their behavior of teaching students with disabilities.

> *"The view of the people around us is still very important. I have to consider misunderstandings of people around us, such as teaching disabled students for a long time. They will think that the teacher himself is also abnormal." (Interviewee: F4, F5, F6)*

Some interviewees mentioned their teacher would influence their intention to teach students with disabilities.

> *"The influence of my teacher, especially my physical education teacher in high school is great for me."(Interviewee: M1, F5)*

Some interviewees cared about the desire of students with disabilities and their parents.

> "If Hanna or her parents hope me to teach her, I will do that." *(Interviewee: F2, F4, M5, M7)*

> "When I was in junior high school, I had a classmate with mental retardation. Many classmates didn't play with and often made fun of him. But I really hated these classmates. I often helped him. I think we should give more help to students with disabilities." *(Interviewee: M5)*

For most interviewees, the most important perceived social pressure came from the

inclusive environment including the tradition treating students with disabilities, the degree of respect on students with disabilities of headmaster and teachers. *(Interviewee: F4, F6, F3, F5, F7, M6, M7)*

> *"If the school cares for students with disabilities on aspects, I will not treat them differently." (Interviewee: F4)*

> *"If some colleague think that students with disabilities could not be taught and other colleagues also hold the attitude, I will also consider not letting him take my physical education class." (Interviewee: M7)*

> *"If there is no inclusive environment for students with disabilities and colleagues not accept students with disabilities in their class, I will follow them. Because I'm afraid they will see me as a weird." (Interviewee: F7)*

> *"Opinions and practices of my colleagues with many years of teaching experience will affect me toward teaching students with disabilities." (Interviewee: M6)*

Some participants think they will teach the students with disabilities if given more economic support, other participants think they should to teach them in the view of teacher's responsibility (Interviewee: F2, F3). In addition, some interviewee regards that he still will to teach student with disability if the school or leader encourage them to teach students with disabilities without economic support. *(Interviewee: F1)*

> "I think the constantly special training for teaching students with disability is necessary before and during the teaching career."*(Interviewee M2, F6, F3)*

> "Since his parents sent him to the general school, I think his disability level is not severe. It doesn't matter for me if there is one or two students with disability in one PE class. Besides, we should teach for ten years at least after graduated. I think it is more or less possibility for us to teach students with disabilities during the 10 years. I think it is better for us to teach students with disability earlier for acquire teaching experience." *(Interviewee: M5)*

"Although I don't have special teaching experience, I have a little reluctance, however, because each student should enjoy the equal education, I think I should teach the students with disability." *(Interviewee: M7)*

5.3.4 Perceived behavioral control

Many interviewees expressed there are many uncontrolled factors obstruct their intention and behavior toward teaching students with disabilities.

"Parents, neighbors and communities have not created great environments for children to take part in physical activities. Nowadays, many teenagers are still not interested in physical activity and even rejecting on physical education classes." (Interviewee: F6)

"They all had prejudice on sports and thought that sportsmen were large and stupid. So, letting them imagine that students with disabilities taking physical education class is difficult." (Interviewee: F3)

"Because of the handicap, student with disabilities can't participate well in physical education class and will drag on the progress of teaching. The ridicule and blame from other classmates will increase her sense of inferiority and they will not be willing to take part in physical education."(Interviewee: F5, M1，M2, M3, M4, M6)

"Students with disabilities are prone to have safety problems in physical education classes, and extra protection should be given to them in class. If they are injured in physical education class, the parents of them may query the teacher and cause trouble to the school."(Interviewee: F1, F4, F6, F7, M5, M7)

"I am worried that the headmaster and class adviser of students with disabilities do not want to cause unnecessary trouble and not allow them to take part in physical education class."(Interviewee: F2)

Some female interviewees regard the first and important influencing factor is economic supports of school. *(Interviewee: F5, F6, F7)*

"The first factor is economic supporting education toward students with disabilities, and it will support me to contact and know them with confidence."(Interviewee: F5)

"The economic condition of school enrolled students with disabilities is the main influencing factor."(Interviewee: F1)

In addition, "the sports equipment of school for students with disabilities is the main influencing factor."(Interviewee: F2, F3)

Facing all the obstacles above, some interviewees expressed their confidence in teaching students with disabilities in their physical education classes.

"I have learned some knowledge and skills toward teaching students with disabilities. Maybe the actual situation will be more complexed and my related knowledge and skills are not enough, but I will continue to learn and improve myself while teaching. I will treat her equally."(Interviewee: F2, F3, F4, F6)

"It is not necessary to improve the motor skill of students with disabilities into a high level and the demand for him should not too high. So that she can feel the sense of existence and enjoy the pleasure of physical activity."(Interviewee: M1, M5)

But most interviewees showed lacking confidence in teaching students with disabilities in their physical education classes.

"I don't think I have the ability to teach students with disabilities in my physical education classes. I have no any teaching experience of that. In addition, I am afraid of safety accidents. I don't know whether the school in which I will work in the future admits students with disabilities."(Interviewee: F1, F5, F7)

"Currently, the related education and courses we received in university are too little. We don't have enough contact experience and teaching experience."(Interviewee: M2, M3, M4, M6, M7)

5.4 Discussion and Conclusion

This chapter aimed to investigate preservice physical educator' intention toward teaching students with disabilities and its three direct measures by using the methodology of interview based on the Theory of Planned Behavior.

Synthesizing above all results, it could be found that most of interviewees' intention toward teaching students with disabilities was unoptimistic and no difference on gender and contact experience.

Many interviewees expressed their negative attitude toward teaching students with disabilities, but they also emphasized that they would intend to teach them if they accepted related education and training. Related to the measure of subjective norm, the most important social pressure for preservice physical educators is the inclusive environment in school which they will be worked in, followed by friends, teachers, and parents of students with disabilities. Most interviewees showed lacking confidence in teaching students with disabilities in their physical education classes. The reason is that they perceived uncontrolled obstacles and felt they had not enough abilities to teach them.

Chapter 6: Changing Attitude

6.1 Introduction

In order to examine the influence of mid-term adapted physical education training program on preservice physical educators' attitude toward students with disabilities, an intervention including a 20-week adapted physical education training program was carried out. Implicit Association Test (IAT) was used to evaluate the efficiency of the intervention. The experiment aimed to explore whether preservice physical educators' implicit attitude toward students with disabilities could be improved.

In this chapter, the following hypothesis was proved.

Ha5. It is possible that preservice physical educators' implicit attitude toward students with disabilities can be improved by a mid-term adapted physical education training program.

6.2 Method

6.2.1 Participants

Participants were 85 preservice physical educators of the second academic year recruited from Southwest University. 51 of them were males and 34 were females, with age ranging from 17 to 23 years old (Mage-19.91, SD-1.16). All of them had normal eyesight and were right-handedness.

Table 6.1 Information of participants

Group category	Number			Age (years)		
	male	female	total	Min	Max	M
Experimental group	16	16	32	18	22	19.88
Control group	22	17	39	17	22	20.04

There were 85 participants attended pretest, and 42 were assigned in the experimental group and 43 were in the control group. 10 participants in the experimental group were ruled out

from post-test analysis because they had not finished the training program. In the post-test, 4 participants of control group were also taken out since they did not attend the post-test. Therefore, 71 valid participants were retained (See Table 6.1).

6.2.2 Instrument

The IAT test procedure was used in present study to investigate the changes of preservice physical educators' implicit attitudes toward students with disabilities. The IAT test procedure was wrote in E-Prime 1.1 produced by the company "Psychology Software Tools". It was used to investigate the implicit attitudes of participants toward students with disabilities and normal students. Their reaction time and accuracy were automatically recorded. The experimental procedure was presented by Lenovo computers with Windows XP operating system and resolution ratio of 1024 x 768 pixels.

The experimental procedure consists of three parts, basic information page, instruction page and the formal test. The formal IAT test specifically included 7 steps. Step 1: the practice of target concept words including Chinese characters relevant to students with disabilities and normal students, try 20 times. Step 2: the practice of attribute words including commendatory and derogatory words, try 20 times. Step 3: compatible task[1] including students with disabilities corresponding derogatory words and normal students corresponding commendatory words, try 20 times. Step 4: repeat step 3, but try 40 times. Step 5: practice target concept words again, but put the button reversely and aim to balance the position effect when target words appearing in step 1, try 20 times too. Step 6: incompatible task including students with disabilities corresponding commendatory words and normal students corresponding derogatory words, try 20 times. Step 7: repeat step 6, but try 40 times (See Table 6.2). And then, take the record of step 3, 4, 6, and 7 as the original statistic data.

During the test, instructions were presented in each step, and the screen appeared red "×" and when participant made a mistake and required to put the right button to change it. The

[1] Compatible task is to refer that the link between the concept words and the attribute words is consistent with the assumptions of implicit attitudes. The incompatible task is the opposite.

exposure time of words is 250 milliseconds. The reaction time should be changed into 300 milliseconds if it was less than 300 milliseconds. The reaction time should be changed into 3000 milliseconds if it was more than 300 milliseconds. No any changing if there is an error reaction time and deleting any data of extreme participants.

Table 6.2 The design of IAT steps

Steps	Task description	Function	Times	Key F	Key J
1	target concept discrimination	practice	20	Normal	Disablility
2	attribute discrimination	practice	20	Commendatory	derogatory
3	compatible task	test	20	N + C	D + d
4	compatible task	test	40	N + C	D + d
5	reversed target concept discrimination	practice	20	Disability	Normal
6	incompatible task	test	20	D + C	N + d
7	incompatible task	test	40	D + C	N + d

6.2.3 Preparation of IAT material

The test materials consisted of target concept characters and attribute characters. Target concept characters included two kinds of nouns, referring to students with disabilities and normal students, respectively. Attribute characters included two kinds of adjectives, commendatory and derogatory.

The first step was to select target concept characters and attribute characters. The concept of "students with disabilities" was according to the character "students with disabilities" in a special education dictionary. 10 alternative characters that represented the mean of "students with disabilities" and 10 alternative characters that represented the mean of "normal students" were selected by brainstorming of three psychological professors and 8 preservice physical educators. Class representative usually represents the excellent pupil of a course in the background of Chinese campus culture. So, the 10 alternative "normal students" characters were 10 courses' name added up representative, such as "English representative".

30 alternative commendatory characters related to “student with disabilities and normal student” and 30 alternative derogatory characters related to “student with disabilities and normal student” were selected by brainstorming of 8 preservice physical educators and then determined by three psychological professors.

The next step was to invite 77 preservice physical educators to evaluate the 20 alternative concept characters and 60 alternative attribute characters by three level (0 – not fit; 1 – fit; 2 – very fit) respectively. And summed the score of every character, and respective selected the top 5 target concept characters of student with disabilities, the top 5 target concept characters normal students, the top 8 commendatory characters and the top 8 derogatory characters of student with disabilities, and the top 8 commendatory characters and the top 8 derogatory characters of normal students (See Table 6.3).

Table 6.3 Target concept characters and attribute characters

Student with disabilities	♦Concept word♦	Normal student
1. Students with mild mental retardation		1. Physical education class representative
2. Students with emotional and behavioral disorders		2. Chinese language class representative
3. Students with mild mental disorders		3. Mathematics class representative
4. students with autism		4. English class representative
5. students with ADHD		5. Science class representative

Commendatory characters		Attribute characters	Derogatory characters	
1. self-esteem	2. Sincere		1. introversive	2. inferior
3. endeavor	4. goodness		3. difficult to communicate	4. awkward
5. strong	6. righteousness		5. fierce	6. parsimonious
7. generous	8. careful		7. burdensome	8. unrefined
9. sunshine	10. active		9. arrogant	10. selfish
11. youthful	12. Self-confident		11. lazy	12. indifferent
13. motivated	14. enthusiastic		13. childish	14. fraudulent
15. strive	16. persevere		15. dissolute	16. idle

6.2.4 Preliminary

Before the formal test, a preliminary test was conducted to 16 preservice physical educators

selected randomly from Southwest University in order to test the usability of materials and procedure of the test. The result indicated that 75.6% preservice physical educators could clear distinguish the words represented “student with disabilities” and “normal student”. The time used during the whole test process was about 20 minutes. So, the test could be carried out.

6.2.5 Procedure

The test was conducted in a psychology laboratory which could hold 120 subjects at the same time. After being seated at a table with a desktop computer in the lab, subjects received all instructions from experimenters and provided all of their responses via the computer keyboard.

Half of the subjects performed the IAT test for “student with disabilities” and the other half subjects were tested on the IAT test for “normal student”, in order to balance the sequential effects of the experiment.

The same experiment was repeated again after the mid-term adapted physical education training program.

6.2.6 Data analysis

The data processing was according to the research of Greenwald, Nosek, and Banaji (2003), selected the data in step 3, 4, 6 and 7, then calculated the mean reaction time of every step, counted the inclusive SD between step 3, 6 and step 4, 7; and then calculated the difference (D1) of step 3 and step 6, and the difference (D2) of step 4 and step 7; finally took the value of D(D2-D1) as the effect value of IAT.

SPSS21.0 was used to carry out paired sample t test, single factor analysis of variance, paired-samples t test and correlation analysis.

6.3 Results

6.3.1 Descriptive statistics of participants on demographic measures

In current study, 71 preservice physical educators' data were valid. Their average age was almost 20 years. 43.66% of them were females, and 59.15% of them had the contact experience with student with disabilities. Experimental group had 32 participants and female of them accounted for 50.00%, control group had 47 participants and female of them accounted for 38.46%.

Table 6.4 Results of descriptive statistics on demographic measures

Age	Gender	Contact experience	Group
19.98±1.01	Male (n=40; 56.34%)	Yes (n=42; 59.15%)	Experimental (n=32)
	Female(n=31; 43.66%)	No (n=29; 40.85%)	Control (n=39)
Sum	N=71		

6.3.2 Implicit attitude before training

In order to investigate preservice physical educators' implicit attitude toward students with disabilities, paired-samples t test was conducted to analyze the data. Table 6.5 showed, in the current IAT, that preservice physical educators' reaction time on incompatible task was statistically significant more than their reaction time on compatible task. So, the IAT effect was apparent. The result indicated that preservice physical educators preferred to the relationship between student with disabilities and derogatory words and the relationship between normal student and commendatory words when they carried out tasks using the same key in this IAT.

Table 6.5 Paired-samples t test of compatible and incompatible task

Group	N	*M*	*SD*	*t*	*p*
compatible	71	455.80	83.63	-6.620***	0.000
incompatible	71	640.07	235.08		

n. s. $p > .05$; * $p < .05$; ** $p < .01$; *** $p < .001$

In order to make sure there was no difference between experimental group and control group on IAT in the pretest, the homogeneity test was conducted. The results (See Table 6.6)

indicated that there was no significant difference between experimental group and control group participants reaction time on both the compatible and in compatible tasks.

Table 6.6 Results of descriptive statistics and T test on IAT in different demographic measures

Measures	Group	*M ± SD*	*t*	*p*
compatible	Experimental group (n=32)	453.54 ± 73.35	-.204 n. s.	.839
	Control group(n=39)	457.65 ± 92.12		
incompatible	Experimental group (n=32)	614.27 ± 259.60	-.836 n. s.	.406
	Control group(n=39)	661.24 ± 214.01		
prejudice	Experimental group (n=32)	160.73 ± 266.89	-.764 n. s.	.448
	Control group(n=39)	203.59 ± 205.85		

n. s. $p > .05$; * $p < .05$; ** $p < .01$; *** $p < .001$

6.3.3 The influence of demographic measures on IAT

Table 6.7 Results of descriptive statistics and T test on IAT in different demographic measures

Measures	Category		*M ± SD*	*t*	*p*
Gender	compatible	male (n = 40)	465.50 ± 90.62	.480 n. s.	.632
		female (n = 31)	456.02 ± 81.33		
	incompatible	male (n = 40)	669.17 ± 240.92	1.563 n. s.	.122
		female (n = 31)	594.84 ± 183.88		
Contact experience	compatible	Yes (n = 42)	454.20 ± 82.31	-1.071 n. s.	.287
		No (n = 29)	476.90 ± 94.12		
	incompatible	Yes (n = 42)	649.34 ± 211.91	.612 n. s.	.560
		No (n = 29)	617.23 ± 240.73		
Group	compatible	Experimental (n = 32)	440.03 ± 74.65	-1.898 n. s.	.061
		Control (n = 39)	476.73 ± 91.69		
	incompatible	Experimental (n = 32)	619.60 ± 208.30	-.639 n. s.	.527
		Control (n = 39)	651.78 ± 230.87		

n. s. $p > .05$; * $p < .05$; ** $p < .01$; *** $p < .001$

To examine the influence of gender, contact experience with disabilities and group on

preservice physical educators' reaction during the compatible and incompatible tasks in IAT, Independent-Samples T test was applied in this study. Table 6.7 showed that gender, contact experience and group had no statistically significant influence on preservice physical educators' reaction time on both compatible and incompatible tasks. The results indicated that male preservice physical educators' had the same implicit attitude toward student with disabilities and was negative, the implicit attitude toward students with disabilities of preservice physical educators who had the contact experience with student with disabilities was no statistically difference with that of preservice physical educators who had no the contact experience with student with disabilities and was negative too, experimental group's implicit attitude toward students with disabilities was no statistically difference with that of control group and all were negative also.

6.3.4 The change of implicit attitude after training

Table 6.8 Descriptive statistics and paired-sample T test of reaction time before and after training

Group		Category	*M ± SD*	*t*	*p*
Experimental	compatible	pre (n = 32)	453.54 ± 73.35	-2.710**	.011
		post (n = 32)	540.39 ± 180.69		
	incompatible	pre (n = 32)	614.27 ± 98.98	4.458***	.000
		post (n = 32)	421.38 ± 154.18		
	prejudice	pre (n = 32)	160.73 ± 266.89	4.671***	.000
		post (n = 32)	-119.01 ± 197.06		
Control	compatible	pre (n = 39)	457.65 ± 92.12	.659 n. s	.514
		post (n = 39)	442.46 ± 99.19		
	incompatible	pre (n = 39)	661.24 ± 214.01	.432 n. s.	.668
		post (n = 39)	637.49 ± 220.85		
	prejudice	pre (n = 39)	203.59 ± 205.85	.159 n. s.	.875
		post (n = 39)	195.03 ± 213.70		

n. s. $p > .05$; * $p < .05$; ** $p < .01$; *** $p < .001$

The same IAT was conducted again on the same subjects in last IAT after the experimental group participants attended a 20-week adapted physical education training program. The

following Tables showed significant difference on implicit attitudes between the experimental and control groups in the posttest.

The descriptive statistics and t test in Table 6.8 showed that the experimental group's reaction time on compatible and incompatible tasks were statistically significant changed before and after training. But the control group's reaction time on compatible and incompatible tasks did not change between the pretest and the posttest. This indicated that the implicit attitude toward student with disabilities of preservice physical educators in experimental group was statistically significant influenced by the mid-term adapted physical education training program, and their attitude was changed from prejudice into positive ($t = 4.671$, $p = 0.000 < 0.001$).

After received 20 weeks training program and compared with control group, the reaction time of preservice physical educators in experimental group was statistically significant different not only on compatible task but also on incompatible task (See Table 6.9). This indicated that, lateral compared with control group, the mid-term adapted physical education training program had statistically significant positive changed preservice physical educator's implicit attitude toward student with disabilities.

Table 6.9 Descriptive statistics and t test of reaction time after training

Task	**Group**	***N***	***M ± SD***	***t***	***p***
Compatible	experimental	32	540.39 ± 180.69	2.745**	.009
	control	39	442.46 ± 99.19		
Incompatible	experimental	32	421.38 ± 98.98	-5.477***	.000
	control	39	637.49 ± 220.85		
Prejudice	experimental	32	-119.01 ± 197.06	.771***	.000
	control	39	195.03 ± 213.70		

n. s. $p > .05$; * $p < .05$; ** $p < .01$; *** $p < .001$

In short, by vertical and horizontal comparison, preservice physical educators' implicit attitudes toward students with disabilities were statistically significant positively influenced by mid-term adapted physical education training program.

6.4 Discussion

This chapter investigated mid-term adapted physical education training program was whether or not positively influence preservice physical educators' implicit attitude toward students with disabilities. We selected 71 participants from Southwest University attended pre and post Implicit Association Test (IAT) in a same psychology lab. Participants in experimental group received 20 weeks adapted physical education training.

6.4.1 Preservice physical educators had prejudice on student with disabilities

The major finding of pre-IAT was that preservice physical educators preferred the relationship between student with disabilities and derogatory words and the relationship between normal student and commendatory words when they carried out tasks using the same key. This indicated that preservice physical educators' implicit attitude toward normal students was positive, while negative attitude was revealed when coming to the disabilities group. In other words, preservice physical educators had prejudice on students with disabilities.

Few previous researches focused on preservice physical educators' implicit attitude toward students with disabilities. But many researchers researched implicit attitude of preservice educators from different majors. The result of this finding provide support for previous work of J. Liu (2017) who reported that teacher candidates showed negatively implicit stereotypes towards students with disabilities in both the positively implicit association test and the negatively implicit association test. In fact, in China, college students' implicit attitude towards individuals with disabilities was negative on the whole. Many studies reported that college students hold negatively implicit attitudes towards individuals with disabilities in China (G. Chen & Zhang, 2012; J. Chen, 2016; Shuang Chen, Ma, & Zhang, 2011; Ma, Zhang, & Wang, 2012; Wu, 2014; Z. Zhang, 2012). The same situation was reported in other countries. Sigurðardóttir (2015) reported that there was a negative bias towards obese individuals, with 73% participants (Undergraduate Psychology Students from Iceland) demonstrating strong, moderate or slight implicit bias of which 33% showed strong bias.

This study also found that gender was not related to preservice physical educators' implicit attitude toward students with disabilities. The result also was supported by past researchers (G. Chen & Zhang, 2012; J. Chen, 2016; J. Liu, 2017; Ma et al., 2012). But, Wu (2014) found that the implicit attitude of male college student were more negative than that of female college student toward students with disabilities.

No significant difference was found on implicit attitudes toward students with disabilities between preservice physical educators who had contact experience and preservice physical educators who had no contact experience. This result was supported by previous researchers. G. Chen and Zhang (2012) reported that contact experience had no significant influence on college students' implicit attitudes toward individuals with disabilities. The same result was also found in the research of Z. Zhang (2012) and the study of J. Liu (2017).

6.4.2 Preservice physical educators' implicit attitude was changed

An important finding of this study was that preservice physical educators' implicit attitude toward students with disabilities was changed by a mid-term (20 weeks) adapted physical education training program. This indicated that their implicit attitude toward student with disabilities could be changed in a semester. So, the Ha5 was proved.

Compared with explicit attitude, the forming of implicit attitude is a slow and long-time process. J. Liu (2014) reported that there was no significant difference of preservice educators' implicit attitude toward individuals with disabilities between the pretest and the posttest, after they attended a 6-week special education training program. It reflected an associative system characterized by a slower process of repeated pairings between an attitude object and related evaluations and was not affected by explicit processing goals, uniquely predicted spontaneous behaviors, and was exclusively affected by associative information about the attitude object that was not available for higher order cognition (Rydell & Mcconnell, 2006). In other words, implicit attitudes are relatively less consciously accessible, less controllable, and more automatic than their explicit counterparts (De, Teige-Mocigemba, Spruyt, & Moors, 2009; Greenwald & Banaji, 1995; D.

Y. Kim, 2003). So, the change of implicit attitude need more time than that of explicit attitude according to the findings of current study.

6.5 Conclusion

The current experimental research proved two facts. One was that Chinese preservice physical educators' implicit attitudes toward students with disabilities were negative. That is to say they had prejudice on students with disabilities. Another was that implicit attitude toward students with disabilities could be improved by mid-term adapted physical education training.

Furthermore, the current study also found that gender and contact experience with disabilities had no significant influence on the change of preservice physical educators' implicit attitude toward students with disabilities.

Chapter 7: General Discussion and Conclusion

7.1 Overview

This study was to investigate Chinese preservice physical educators' intention toward teaching students with disabilities including its current situation, influence factors, and the possibility to change. Data that came from questionnaire survey, experimental research, and semi-structure interview verified each other, and proved all 5 hypotheses of this study. Chapter 4, chapter 5, and chapter 6 reported the results and addressed the detail research questions. In this chapter, the general discussion and conclusion, recommendations and the limitations of the study was presented in order to explicit the evidence of the research question.

7.2 Discussion and Conclusion

Four conclusions were presented in here by synthesizing findings of chapter 4, chapter 5, and chapter 6. Firstly, Chinese preservice physical educators' intention toward teaching students with disabilities was positive but unrealistic. Secondly, professional preparations and attitude toward teaching students with disabilities were main factors of influencing Chinese preservice physical educators' intention toward teaching students with disabilities. Thirdly, preservice physical educators' implicit attitude toward students with disabilities could be improved by a mid-term (20-week) adapted physical education training program. Finally, the applicability of Ajzen's Theory of Planned Behavior and Rizzo's questionnaire of PEITID were well in the background of China.

7.2.1 The intention was positive but unrealistic

Findings of the questionnaire survey in chapter 4 addressed that Chinese preservice physical educators' intention toward teaching students with disabilities was positive but unrealistic. This point was supported by findings from interviews in chapter 5 and experimental research in chapter 6. The same result was found in the semi-structure interviews that most of interviewees expressed they would to teach students with disabilities but had no ability to teach them. To a certain extent, the results is somewhat

similar to the research of Lautenbach and Antoniewicz (2018), which hold that the implicit attitudes and explicit attitudes towards teaching inclusively in preservice PE teachers are ambivalent.

The questionnaire survey explored that the unrealistic situation was reflected by preservice physical educators' lower behavioral beliefs and control beliefs. Their prejudice on students with disabilities maybe resulted in their lower behavioral beliefs and their shortage of professional preparation on teaching students with disabilities led to their poor control beliefs. The result of IAT indicated that preservice physical educators had prejudice on students with disabilities.

The conclusion that "Chinese preservice physical educators' intention toward teaching students with disabilities was positive but unrealistic" was consistent with the judgment of Prof. Miloň Potměšil (Potměšil, 2017). On the finding of "preservice physical educators' positive intention toward teaching students with disabilities", this study was consistent with many previous findings of quantitative and qualitative researches (Hodge & Jansma, 2000; M Jeong & Block, 2011; Pedersen et al., 2014; Qi & Ha, 2012; M. Shahbazi et al., 2013; Kelly Smith, 2013; Sofo et al., 2016). However, the finding of "unrealistic positive intention of Chinese preservice physical educators toward teaching students with disabilities" in this study was not consistent with any previous works.

The formation of abilities to teach students with disabilities is only via professional education including special education courses, adapted physical education courses, related training programs, and educational practices. Currently in China, few related courses, practicum and training programs were constructed into the curriculum system of preservice physical educator. According to Bandura's Theory of Self-efficiency (Bandura, 1977), improve preservice physical educators' knowledge and skills about adapted physical education and inclusive education will promote their attitude and intention to teach them.

7.2.2 Attitude and professional preparation as main factors

This study explored that preservice physical educators' implicit attitude toward students with disabilities and their professional preparations related to teach students with

disabilities were main factors influencing their beliefs toward teaching students with disabilities, from the perspective of preservice physical educators themselves. This conclusion was proved by data analysis from questionnaire survey, IAT, and interviews in this study.

According to the TPB model in this study (see Figure 4.5), ATB was the biggest predictor of Intention in its three direct measures and explained 42.8% of variance in preservice physical educators' intentions toward teaching students with disabilities. But attitudes include implicit attitude and explicit attitude. The lower A_b (Behavioral beliefs) in this study showed that preservice physical educators' implicit attitude toward students with disabilities could be negative. And this point was proved by the data from IAT in current study. So, Chinese preservice physical educators' implicit attitude toward students with disabilities should be improved. This is the building blocks for their intention to teach students with disabilities. Because preservice physical educators' implicit attitude toward students with disabilities represented their preconceived notions about disabilities and which was formed during their previous daily life. This kind of preconceived notion about disabilities, to a large extent, decides their behavioral beliefs toward teaching students with disabilities.

The questionnaire survey in this study found that Chinese preservice physical educators' professional preparation had significant positive influence on most TPB measures especially adapted physical education course had significant positive influence on behavioral beliefs and control beliefs. But, more than 75% participants reported that they had not taken any Adapted Physical Education courses, and more than 90% participants reported they had not taken any Special Education course. Furthermore, the seldom opportunity for Chinese preservice physical educators to teach students with disabilities was also an important factor resulted in their lower beliefs to teach. Because peoples' intentions and behaviors take account of and are consistent with their beliefs no matter how the beliefs originated (Ajzen & Dasgupta, 2015). Analysis of interview supported this conclusion. Most interviewees showed lacking confidence in teaching students with disabilities because they perceived uncontrolled obstacles and had not enough abilities to

teach.

All previous findings also emphasized the importance of professional preparation for preservice physical educators' intention toward teaching students with disabilities (Mihye Jeong, Oh, & Kim, 2017; Kurniawati, Boer, Minnaert, & Mangunsong, 2017; So, Rizzo, & Tripp, 2007; Sofo et al., 2016; Taliaferro et al., 2015). These professional preparations included Special Education Course, Adapted Physical Education Course, teaching experience, and related training program.

This study also discussed other factors that influenced Chinese preservice physical educators' intention and related measures toward teaching students with disabilities. Gender was no statistically significant differences on intention and attitude, and this finding was consistent with previous studies. But, the current study also found that male was higher than female on measures of subjective norm, behavioral beliefs, normative beliefs and control beliefs. Female worried that people around them would misunderstand their teaching behavior.

Grade had statistically significant influence on intention. The intention of freshman and sophomore was higher than that of junior and senior. Also, region had statistically significant influence on intention and three direct components. The mean score of intention, attitude, subjective norm and norm beliefs of preservice physical educators from Central China were significantly higher than that of preservice physical educators from Western and Eastern China. This attributed to that all of the universities from Central China in this study had set up elective course related to adapted physical education and special education.

The data not only from questionnaire survey but also from semi-structure interview showed that contact experience had no statistically significant influence on Chinese preservice physical educators' intention and its measures. But, contact experience had statistically significant influence on their teaching quality and teaching competency toward students with disabilities. Preservice physical educators who had the experience of contact disabilities had significant more adapted physical education courses, special education courses, reported better teaching quality and teaching competency toward students with

disabilities than preservice physical educators who had not that experience did.

7.2.3 Their implicit attitude could be changed in one semester

This study explored that it was possible to change preservice physical educators' implicit attitude toward students with disabilities from negative to positive through a mid-term (20 weeks) adapted physical education training program.

Many previous findings reported that implicit attitude was a slow and long-time process and was very hard to change in a short time. So, related professional preparation can help preservice physical educator to clear up their prejudice on students with disabilities in their college years. Taking into account the long-term nature of the change of implicit attitude, professional preparation of preservice physical educator toward teaching students with disabilities should began as early as possible.

In addition, gender and contact experience with disabilities had no significant influence on the change of preservice physical educators' implicit attitude toward students with disabilities.

7.2.4 Well applicability of PEITID and TPB

This study investigated Chinese preservice physical educators' intention toward teaching students with disabilities by using the Chinese version of questionnaire '*Physical Educator's Intention Toward Teaching Individuals with Disabilities III'* (PEITID-III) based on the *Theory of Planned Behavior* (TPB). Results of the current study showed that both PEITID and TPB performed well applicability in the background of China.

The *PEITID-III* was translated from English into Chinese by bilingual professors in physical education and educational psychology field. The Chinese version *PEITID-III* had well construct validity and acceptable reliability. Its Cronbach's alpha coefficient for the whole was more satisfactory (α=.85).

The applicability of TPB in current study was good. Chinese preservice physical educators' intention toward teaching students with disabilities was predicted by its three direct

measures (attitude toward the behavior, subjective norms, and perceived behavioral control) and three indirect measures (behavioral beliefs, normative beliefs, and control beliefs). Chinese preservice physical educators' self-reported behavior toward teaching students with disabilities was predicted by their intentions and perceived behavioral control, too.

The TPB model in current study, compared with the TPB model of Ajzen, presented more prediction paths. Behavioral beliefs indirect predicted their intention toward teaching students with disabilities was also fully mediated by perceived behavioral control. Normative beliefs indirect predicted intention was also partially mediated by attitude toward the behavior. Control beliefs indirect predicted intention was also fully mediated by attitude toward the behavior.

7.2.5 Summary and suggestion

In summary, this study investigated the current situation of Chinese preservice physical educators' intention toward teaching students with disabilities and examined the applicability of questionnaire PEITID-III and the Theory of Planned Behavior. All five research questions and hypotheses were answered and approved. It was found that:

(1) Chinese preservice physical educator's intention toward teaching students with disabilities was positive but unrealistic currently. This unreality was mainly shown in their lower behavioral beliefs and control beliefs toward teaching students with disabilities. The most important reason was that they had prejudice on students with disabilities and not enough professional preparations for inclusive.

(2) Chinese preservice physical educators' intention toward teaching students with disabilities was predicted by its three direct measures (attitude toward the behavior, subjective norms, and perceived behavioral control) and three indirect measures (behavioral beliefs, normative beliefs, and control beliefs).

(3) Chinese preservice physical educators' self-reported behavior toward teaching students with disabilities was predicted by their intentions and perceived behavioral control.

(4) For the attributes of Chinese preservice physical educators' intention and self-reported behavior toward teaching students with disabilities, the effect of their grade, region, and professional preparations were significant, but the effect of their gender and contact experience with disabilities were not significant.

(5) Chinese preservice physical educators had prejudice on students with disabilities. Their implicit attitude (prejudice) toward students with disabilities could be improved and changed into positive attitude by mid-term (20-week) adapted physical education training program.

Furthermore, in current study, not only the questionnaire PEITID-III but also the Theory of Planned Behavior performed well applicability in the background of China.

With the economic development, nowadays, China already had the ability and began to develop inclusive education. As a part of inclusive education, inclusive physical education related to the quality of education and life of students with disabilities and should be paid more attention in China. In view of findings of this study, there are some suggestions to Chinese government and universities.

Suggestions to Chinese government:

Sports and physical activities are important not only for normal students but also for students with disabilities. An inclusive social and educational environment is beneficial for the understanding between different individuals and groups, and so as to creating the "community of shared future for mankind" (T. Qian, Xiong, Liu, & Liu, 2012; Z. Qian, 2018). Therefore, Chinese government should provide the support on laws, policies, and economy for inclusive education and even for inclusive physical education directly. For example, in the qualification examination of physical education teacher, the ability and knowledge of adapted physical education and special education should be tested. The situation of construction and development on adapted physical education should be viewed as an important part of the discipline construction in the major evaluation of Physical Education. The creation of inclusive environment in society, community, campus, and family should be encouraged by

policies of government.

Suggestions to Chinese universities:

As training institutions of physical educators for all primary and secondary education, Chinese universities should focus on improving preservice physical educators' implicit attitude toward students with disabilities and strengthening their professional preparation toward teaching students with disabilities during their whole college life.

Firstly, Chinese universities should set up some compulsory courses and elective courses related to adapted physical education and special education for preservice physical educators in order to cultivate their basic ability and knowledge toward teaching students with disabilities.

Secondly, Chinese universities should develop preservice physical educators' ability toward teaching students with disabilities by different kinds of educational practicum. The collaboration between universities with primary school, communities, and special schools can provide opportunities for preservice physical educators to teach individuals with disabilities and help them to accumulate teaching experience toward students with disabilities.

Thirdly, Chinese universities should build international advanced concept and method on training inclusive physical educator by developing international communication and cooperation.

Finally, Chinese universities should create inclusive education environment including barrier free sports facilities for college students with disabilities. This kind environment is help to improve preservice physical educators' implicit attitude toward students with disabilities.

7.3 Limitation of This Study

There are several limitations needing to be acknowledged although mixed research approach and triangulation strategy were applied for addressing the questions of the study.

First, the mixed research approach was too simple. Three research approaches including questionnaire survey, semi-structure interview, and experimental research were used in three parts separately. The triangulation strategy was not well presented in this study although the data of semi-structure interview and experimental research supported findings of questionnaire survey.

Then, the participants of semi-structure interview and experimental research were recruited only from Southwest University. So, the research conclusions of semi-structure interview and experimental research had certain limitations.

After that, although the Chinese version PEITID-III was translated from English by bilingual professionals in physical education field, there still had the possibility of misunderstanding on questions of the questionnaire and influencing the results of current research.

And more, some uncontrollable factors possibly influenced the results of the posttest of IAT although many variables, such as participants' learning environment, were well controlled. Because that activities of participants in weekend were not be controlled by author during the experimental research.

At last, the semi-structure interviews only conducted before the mid-term adapted physical education training program. Because of the reason of limited time, the plan of semi-structure interviews after the mid-term adapted physical education training program was canceled. This resulted that the findings of experimental research did not get the support of semi-structure interviews.

7.4 Recommendation for Future Study

The development of inclusive education especially inclusive physical education is just on its beginning in the context of China. Chinese primary schools are badly in need of physical educators whom with teaching abilities and knowledge about teaching students with disabilities. This study just focused on the current situation of Chinese preservice physical educators' intention toward teaching students with disabilities, and aimed to appeal

government and universities to cultivate qualified adapted physical educators for primary schools. Considering the limitations of this study and interesting issues, some recommendations for future study were proposed in here.

Firstly, factors that influencing preservice physical educators' intention toward teaching students with disabilities should be paid more attention. Accept gender, grade, and professional preparation, teaching experience, and contact experience, there are many other factors such as preservice physical educators' personalities and category of educational practicum should be researched.

Secondly, in order to examine the influence of adapted physical education course or training program on preservice physical educators' intention toward teaching students with disabilities, the long-term experimental research should be conducted in the future.

Additionally, in consideration of the context of Chinese culture, the Chinese version PEITID-III should be further revised or a new scale should be created in order to better measure Chinese preservice physical educators' intention toward teaching students with disabilities.

Finally, international comparative study on preservice physical educators' intention toward teaching students with disabilities should be launched for the sake of exploring the general problems and regional or cultural differences on this issue.

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APPENDIX A - Physical Educators' Intention Toward Teaching Individuals with Disabilities (PEITID-III) – English Edition

In the questionnaire you are about to complete we ask questions that make use of rating scales with seven places; you are to make a mark (X) in the place that best describes your thoughts. For example, if you were asked about "The weather in Southern California" on such a scale, the seven places would appear as follows:

The Weather in Southern California is good

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

If you strongly agree that the "Weather in Southern California is good*"* then you would place your mark as follows:

The Weather in Southern California is good

strongly agree__X__:_____:_____:_____:_____:_____:_____strongly disagree

In making your ratings please remember the following points:

1) Place your marks in the *middle of spaces*, not on the boundaries:

_____ :____X__:_____:_____ :_____X_____:_____

Like this Not this

2) Answer all items - please do not omit any.

3) Mark the response that best describes your opinion about each statement.

4) Your responses are strictly confidential. This survey is numbered for data processing; your responses will remain confidential.

Please read the following description of a hypothetical student named Hannah. After you read the information please respond to the following questions using the rating scale. Mark a response that best describes your **opinions** about teaching a student like Hannah in your physical education (PE) class.

Assume for a moment that you have just been told that a student named Hannah who has ***Attention Deficit Hyperactivity Disorder*** (ADHD) has just transferred from another school into yours and will be attending your physical education class starting next week. Last year your school system began a countywide physical education testing program based on the state standards. Hannah is physically fit and she is an active participant. Her gross motor skills are in the above average range. Her eye-hand coordination is adequate for a 9 year old. Hannah is beginning to develop the decision making ability to execute skills in game situations.

First, we would like to know about your intention to teach a student like Hannah in your general PE class in the next month.

1. If a student like *Hannah* were in my general PE class in the next month I would teach her.

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

2. I would be willing to teach a student like *Hannah* in my general PE class in the next month.

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

Tell us your opinion about teaching a student like Hannah in your regular PE class.

3. For me, to teach a student like *Hannah* in my general PE class in the next month is:

good_____ :_____:_____:_____ :_____ :_____:_____ bad

4. Teaching a student like *Hannah* in my general PE class in the next month is:

unwise_____ :_____:_____:_____ :_____ :_____:_____ wise

5. Teaching a student like *Hannah* in my general PE class in the next month

Satisfying_____:_____:_____:_____:_____:_____:_____ Unsatisfying

Tell us what you think significant people in your life would expect of you when it comes to teaching a student like Hannah in your general PE class in the next month.

6. Most People who are important to me think that I should teach *Hannah* in my general PE class in the next month.

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

7. People who are important to me want me to teach a student like *Hannah* in my general PE class in the next month.

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

How much control do you believe you have in teaching a student like Hannah in your general PE class in the next month?

8. If I wanted to, I am confident I could teach a student like *Hannah* in my general PE class in the next month.

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

9. It will not be easy for me to teach a student like *Hannah* in my general PE class in the next month.

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

10. Whether or not I teach a student like *Hannah* in my general PE class in the next month is entirely up to me.

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

11. It is mostly up to me whether or not I teach a student like *Hannah* in my general PE class in the next month.

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

Tell us what you believe will occur if you were to teach a student like Hannah in your general P.E. class in the next month.

12. Teaching a student like *Hannah* in my general PE class in the next month will not require much of my time

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

13. I will need more training before I can teach a student like *Hannah* in my general PE class in the next month.

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

14. I have enough teaching experience to teach a student like *Hannah* in my general PE class in the next month.

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

What, if any, value is there in teaching a student like Hannah in your general PE class* in *the next month?

15.It is not worth my effort to teach a student like *Hannah* in my general PE class in the next month.

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

16. One advantage of teaching a student like *Hannah* in my general PE class in the next month is that special academic training is not necessary.

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

17. Because of my lack of teaching experience, I do not feel comfortable teaching a student like *Hannah* in my general PE class in the next month.

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

Tell us what you think the following people would say about you teaching a student like Hannah in your PE class in the next month.

18. My school *principal* thinks that I should teach a student like *Hannah* in my PE class in the next month.

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

19. *Parents* of students with disabilities think that I should teach a student like *Hannah* in my general PE class in the next month.

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

20. *General classroom teachers* think that I should teach a student like *Hannah* in my PE general class in the next month.

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

21. *Special educators* think that I should teach a student like *Hannah* in my general PE class in the next month.

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

22. My *non-disabled students* think that I should teach a student like *Hannah* in my general PE class month.

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

23. My Kinesiology professors think that I should teach a student like *Hannah* in my general PE class in the next month.

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

Tell us the extent you agree with doing what these people think you should do.

24. Generally speaking, I would do what my principal thinks I should do.

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

25. Generally speaking, I would do what parents of students with disabilities think I should do.

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

26. Generally speaking, I would do what general classroom teachers think I should do.

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

27. Generally speaking, I would do what special educators think I should do.

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

28. Generally speaking, I would do what non-disabled students think I should do.

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

29. Generally speaking, I would do what Kinesiology professors think I should do.

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

Now we want to know about your ability to teach a student like Hannah in your PE class in the next month.

30. A lack of special equipment for Hannah will make it impossible for me to teach her in my general PE class in the next month.

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

31. Without teacher assistants it is impossible for me to teach a student like *Hannah* in my general PE class in the next month.

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

32. The behavior of other students will not prevent me from teaching *Hannah* in my general PE class in the next month.

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

Will these conditions affect your ability to teach a student like Hannah in your PE class?

33. A lack of access to special equipment to teach *Hannah* will affect my ability to teach her in my general PE class in the next month.

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

34. Having teaching assistants to help me teach a student like *Hannah* makes no difference in my ability to teach her in my general PE class in the next month.

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

35. The behavior of other students would not have any effect on my ability to teach a student like *Hannah* in my general PE class in the next month.

strongly agree_____:_____:_____:_____:_____:_____:_____strongly disagree

Tell us how often you teach a student like Hannah in your class.

36. If a student like *Hannah* is in your physical education class, would you modify your class activities or make an accommodation to enable her to participate. _____ Yes _____ No

If so, what general accommodations would you employ? (Please describe)

_____

_____

Finally, would you please answer a few general questions about yourself?

37. Identify your gender. _____ Female _____ Male

38. What is your age? _____ Age in years

39. What is your grade? _____ # of academic year

40. Have you taken any Adapted Physical Education courses? _____ Yes _____ No

41. How many courses? _____# of courses _____ None

42. Have you taken any Special Education courses? _____ Yes _____ No

43. How many courses? _____# of courses _____ None

44. Have you had any experience teaching individuals with disabilities?

_____ Yes _____ No

45. How many years have you taught individuals with disabilities?

_____# of years _____ None

46. Do you have any family members with a disability? _____ Yes _____ No

47. Do you have any close personal friends with a disability? _____ Yes_____ No

48. Do you have a disability? _____ Yes _____ No

49. Rate the quality of most of your typical experiences teaching students with disabilities.

_____ No experience _____Not good _____Satisfactory __ __Very good _____Excellent

50. How competent do you feel teaching a student with disabilities?

_____ Not at All _____A Little _____Somewhat competent

_____Very Competent _____ Extremely Competent

APPENDIX B - Physical Educators' Intention Toward Teaching Individuals with Disabilities (PEITID-III) – Chinese Edition

体育师范生对残障学生的教学意向（中文版）

在你即将完成的问卷中，我们要求你使用七个等级的评定法回答问题，在最能描述你想法的地方用"√"做记号。例如，如果有人在量表中问你关于"北京的天气"，这七种情况如下：

北京的天气不错

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

如果你非常同意"北京的天气不错"，那么你就标注如下：

北京的天气不错

非常同意__√__:_____:_____:_____:_____:_____:_____非常不同意

标注时切记以下几个要点：

1. 请标注在横线的中间位置，而不是两个横线之间：

_____ :___√__:_____:_____ :_____ √ _____:__

正确标注　　错误标注

2. 请回答所有的问题，不要有遗漏。
3. 标注出最能描述您对每一个问题看法的选项。
4. 您的回答将得到严格保密。本次调查通过编号进行数据处理，对您的回答保密。

请阅读下面关于一位假设名叫"小娜"的描述，在你阅读完这些信息之后，请用七级评定法对下列问题做出评定，并标注出最能描述你关于"在你的体育课堂中教像小娜这样的学生"的观点的那一项。

设想有那么一刻，你被告知一个患有多动症（注意缺陷多动障碍）、名叫小娜的学生刚从其它学校转学到你的班级，并且从下周开始将参加你的体育课。自从去年，你们的学校系统根据市级标准展开了全区范围内的体育测试。小娜身体健康，且是一位积极的参与者。她的粗大运动技能处于平均水平之上，眼手协调相当于 9 岁水平，目前正处于发展游戏情境中的执行技能的决策能力阶段。

首先，我们想知道你关于"下个月在你的普通体育课中教一位像小娜这样的学生"的意

向。

1. 在下个月的普通体育课上，如果有一位像小娜这样的学生，我将会教她。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

2. 在下个月的普通体育课上，我愿意教一位像小娜这样的学生。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

告诉我们你关于"在你的普通体育课上教一位像小娜这样的学生"的观点。

3. 在下个月的普通体育课上，我教一位像小娜这样的学生是：

好_____:_____:_____:_____:_____:_____:_____坏

4. 在下个月的普通体育课上，我教一位像小娜这样的学生是：

不明智_____:_____:_____:_____:_____:_____:_____明智

5. 在下个月的普通体育课上，我教一位像小娜这样的学生是：

满意_____:_____:_____:_____:_____:_____:_____不满意

请告诉我们，关于"在下个月的普通体育课上，你教一位像小娜这样的学生"这件事情上，你生命中重要的人对你的期望是什么？

6. 在下个月的普通体育课上，大部分对我来说重要的人认为我应该教一位像小娜这样的学生。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

7. 在下个月的普通体育课上，对我来说重要的人想让我教一位像小娜这样的学生。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

你认为你在多大程度上能够把控"在下个月的普通体育课上，你教一位像小娜这样的学生"？

8. 在下个月的普通体育课上，如果我愿意我就有信心能够教一位像小娜这样的学生。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

9. 在下个月的普通体育课上，教一位像小娜这样的学生对我来说是不容易的。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

10. 在下个月的普通体育课上，我是否教一位像小娜这样的学生完全取决于我自己。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

11. 在下个月的普通体育课上，我是否教一位像小娜这样的学生主要取决于我。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

告诉我们，如果下个月的普通体育课上你教一位像小娜这样的学生，你认为会发生什么样的事情？

12. 在下个月的普通体育课上，教一位像小娜这样的学生将不会花费我太多的时间。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

13. 在下个月的普通体育课上教一位像小娜这样的学生之前，我需要更多的培训。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

14. 在下个月的普通体育课上，我有足够的教学经验教一位像小娜这样的学生。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

如果可能，在下个月的普通体育课上，你教一位像小娜这样的学生有什么价值？

15. 在下个月的普通体育课上教一位像小娜这样的学生是不值得我付出努力的。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

16. 在下个月的普通体育课上，我教一位像小娜这样的学生的一个好处是不需要进行特殊的学术训练。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

17. 由于我缺乏教学经验，在下个月的普通体育课上教一位像小娜这样的学生让我感到不舒服。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

告诉我们你认为下列人们对于“你在下个月的普通体育课上教一位像小娜这样的学生”将会怎样说。

18. 我的校长认为，在下个月的普通体育课上我应该教一位像小娜这样的学生。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

19. 残疾学生家长认为，在下个月的普通体育课上我应该教一位像小娜这样的学生。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

20. 普通班级老师认为，在下个月的普通体育课上我应该教一位像小娜这样的学生。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

21. 特殊教育者认为，在下个月的普通体育课上我应该教一位像小娜这样的学生。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

22. 我的非残疾学生们认为，在下个月的普通体育课上我应该教一位像小娜这样的学生。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

23. 我的运动机能学教授认为，在下个月的普通体育课上我应当教一位像小娜这样的学生。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

告诉我们你同意做这些人认为你应该做的事情的程度。

24. 一般来说，我会做我的校长认为我应该做的事。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

25. 一般来说，我会做残疾学生家长认为我应该做的事。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

26. 一般来说，我会做普通班级老师认为我应该做的事。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

27. 一般来说，我会做特殊教育者认为我应该做的事。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

28. 一般来说，我会做我的非残疾学生认为我应该做的事。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

29.一般来说，我会做我的运动机能学教授认为我应该做的事。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

现在我们想知道你是否有能力在下个月的普通体育课上教一位像小娜这样的学生。

30.如果缺少汉娜的特殊设备，对我来说在下个月的普通体育课上教她是不可能的。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

31.如果没有助教的话，对我来说在下个月的普通体育课上教一位像小娜这样的学生是

不可能的。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

32.其他学生的行为将无法阻止我在下个月的普通体育课上教一位像小娜这样的学生。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

下面这些条件将会影响你在普通体育课上教一位像小娜这样的学生的教学能力吗？

33.不会使用特殊设备来教小娜将影响我在下个月的普通体育课上教授她的能力。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

34.有助教帮我教像小娜这样的学生并不能改变我在下个月的普通体育课上教授她的能力。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

35.其他学生的行为对于我在下个月的普通体育课上教一位像小娜的学生的教学能力将没有任何影响。

非常同意_____:_____:_____:_____:_____:_____:_____非常不同意

告诉我们，在你的班级上你会有多经常教一位像小娜的学生。

36.如果在你的体育课上有一位像小娜的学生，你会调整课堂活动内容或者腾个位置出来以便她能参与吗？ _____ 会 _____ 不会

如果会，你将给她腾出大概多大的位置？请描述：

_____

_____

最后，我们请你回答一些关于你自己的一般问题：

37. 你的性别？ _____男； _____ 女

38. 你的年龄？ _____（岁）

39. 你的年级？ _____（年级）

40. 你学过适应体育课程吗？ _____学过； _____ 没学过

41. 学过几门适应体育课程？ _____（门）

42. 你学过特殊教育课程吗？ _____学过； _____ 没学过

43. 学过几门特殊教育课程？ _____（门）

44. 你有教残障学生的经验吗？ _____有； _____ 没有

45. 你教残障学生有多长时间了？ _____（月）或_____（年）

46. 你的家庭成员中有残障人吗？ _____有； _____ 没有

47. 你的亲密朋友中有残障的吗？ _____有； _____ 没有

48. 你有残障吗？ _____有； _____ 没有

49. 标注出你教授残障学生的典型经验的质量。

_____无任何经验；_____ 不好；_____符合要求； _____ 很好；_____ 非常好

50. 你感觉自己在教授残障学生方面有多胜任？

_____无法胜任；_____ 一点点；_____能胜任；_____很胜任；_____ 非常胜任

APPENDIX C – Hints and Vocabularies on Screen in IAT

Hints

Introduction 1

请注视屏幕正中央，此处会相继出现一系列的词。在每个词出现后，请你对其归类。

属于“健全学生”的，请按键f，属于“特殊学生”的，请按键j。

判断类别后按键越准确越快越好.

注:在屏幕的左右上角会分别对应显示“健全学生”“特殊学生”,在按键错误后会有错误提示。

准备好了,请按空格键开始。

Introduction 2

请注意：现在屏幕中央呈现的词的类别有点改变。

属于“褒义词”类别的词，请按键f，属于 “贬义词” 类别的词，请按键j。

其他的都没有变化。

准备好了，请按空格键开始。

Introduction 3

请注意：现在又有一点改变，接下来呈现的词如果属于“健全学生或褒义词”，请按f。如果属于“特殊学生或贬义词”，请按j。
其他的都没有变化。
准备好了，请按空格键开始。

Introduction 4

请注意：现在我们中断一下.

请按空格键继续与刚才一样的归类任务.

Introduction 5

现在请休息一下。
接下来呈现的词以及按键有点变化。
如果词属于“特殊学生 ”的, 请按键f, 如果词属于“健全学生 ”的, 请按键 j。
其他的都没有变化。
准备好了, 请按空格键开始。

Introduction 6

请注意：现在呈现的词有了改变，如果属于“特殊学生或褒义词”，请按f。
如果属于“ 健全学生或贬义词 ”，请按j。
准备好了请按空格键开始。

Introduction 7:

请注意：现在我们中断一下.

请按空格键继续与刚才一样的归类任务.

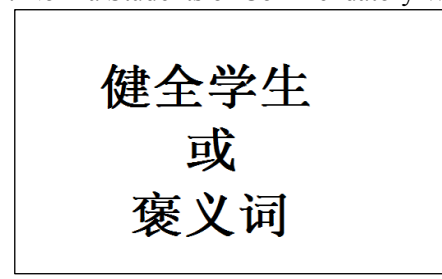
Introduction 8: “Thanks for your participation!”

谢谢您的参与！

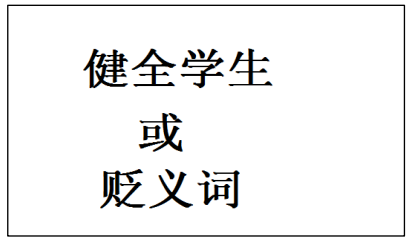
Vocabularies

1. Normal Students

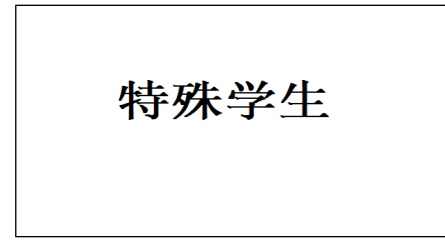
2. Norma Students or Commendatory Words



3. Normal Students or Derogatory words

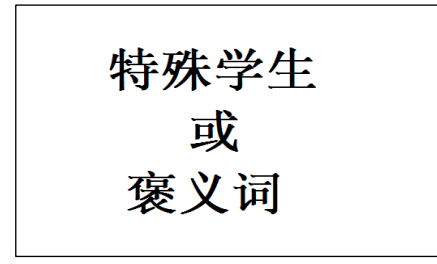


4. Students with Disabilities

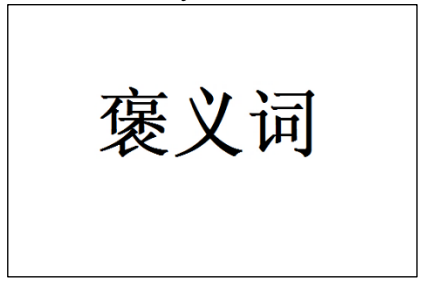


5. Students with Disabilities or Derogatory Words

6. Students with Disabilities or Commendatory Words



7. Commendatory Words



8. Derogatory Word

16 Commendatory Words

自尊	真诚	奋斗	坚持不懈
热心	上进	自信	青春
活力	阳光	细心	豁达
仁义	坚强	善良	努力

16 Derogatory Words

欺骗	幼稚	冷漠	懒惰
游手好闲	自私	自大	难琢磨
累赘	小气	暴躁	笨拙
难交流	自卑	内向	放荡

APPENDIX D – Interview Questions of Preservice physical Educators

Personal Information

Age

Hometown_____(Name of province or city)

Gender_____(Male or Female)

Contact Experience_____(Yes or No)

Interview Questions of Preservice physical Educators

(1) What is your intention to teach a student with disability in your class? Why?

(2) What factors will be considered when you carry on your class include a student with disability?

(3) Can you predict your behavior on teaching student with disability in your class?

(4) Which people around (e.g., principals, family members, colleagues, friends, students, etc.) will affect you to decide to teach a student with disability?

(5) To what degree are you motivated to comply with how others consider you to teach a student with disability? Why?

(6) How confident do you believe you would have in teaching a student with disability?

(7) Can you describe your opinion on teaching student with disability in your class?

(8) What factors affect your ability to teach a student with disability in your class?

APPENDIX E – personal contact with Terry Rizzo