



The Strength and the Correlation Between English Learning Attitudes and Professional Development Needs of Secondary-School English Teachers in Multilingual Areas of China

Wei Zhong, Danyang Li^(✉), and Yuanbing Duan

Yunnan Normal University, Kunming 650510, Yunnan, China
2274313674@qq.com

Abstract. This paper explores the professional development needs of secondary school English teachers from multilingual areas in Yunnan, P. R. China, in particular, the strength of their language learning attitudes and in-service training motivation, the correlations between their language learning attitudes and in-service training motivation, and their difficulties and solutions in English teaching. The data analysis indicates three major findings: (1) attitudes to English contribute most to the motivation to participate in in-service training; (2) attitudes to English speakers have considerable effect on the motivation in relation to professional advancement and cognitive interest; (3) instrumental attitudes to English lead to particular practical needs in teaching training.

Keywords: Language learning attitudes · Professional development needs · Secondary-school English teachers · Multilingual areas

1 Background of the Study

As an essential part of teacher professional development, teacher education, in terms of both pre-service and in-service training, has gradually drawn more and more attention from scholars and the public in China. Influenced by the concepts of lifelong education, different levels of government issued policies and projects have been promoted to enhance the quality of primary and secondary school teachers' education [1]. In the summer of 2010, Ministry of Education (MoE) and Ministry of Finance (MoF) co-issued the National Primary and Secondary Teacher Training Plan (hereinafter National Training Plan, NTP). At the beginning, NTP included two projects, "Primary and Secondary Teacher Training Modeling Project (2010–2012)" and "Primary and Secondary Leading Teacher Training Project in Central and Western Rural Areas of China". The central government thought highly of the function of NTP. In the first part of the "Announcement on implementing National Primary and Secondary Teacher Training Plan by Ministry of Education and Ministry of Finance" [2], it clearly stated the purposes of this national program:

“Primary and secondary school teacher training is local government’s duties and responsibilities, and it should be implemented mainly by local authorities. Central government’s implementation of “National Training Plan” (NTP) is aiming at playing a role for demonstrating, “offering fuel in a snowy winter” and promoting reform. Through implementing the NTP, a batch of “seed” teachers will be trained so as to fulfill their backbone function in carrying forward education for all-round development and teacher training. NTP will develop high quality teacher training resources, innovate teacher training modes and methods, for the sake of carry a nation-wide primary and secondary teacher training into a new stage. NTP focuses on supporting rural teacher training in central and western areas, guiding and encouraging local government, improving teacher training system and intensifying rural teacher training, in order to significantly improve rural teachers’ quality. NTP will foster teacher education reform, and push forward tertiary teacher colleges and universities serving the basic education”. (author’s translation)

As claimed at the beginning of this official document, teacher training is part of “local government’s duties and responsibilities”, and central government’s guidance should be merely understood as “playing the role for demonstrating” which can be taken as providing the model of teacher training. More ironically, the Chinese idiom “offering fuel in a snowy winter”, showing good intention, was originally emphasized in parentheses in this official document. The use of parentheses leads to ambiguous meanings. For one part it can be deemed as emphasizing the original good intention. For the other, it can be interpreted as expressing the view that teacher-training programs run by the local government in the past years were so weak in proficiency that central government was not satisfied with its consequence and the serious educational inequity between urban and rural areas. Whether this is a criticism of local government’s act of omission from central government, or central government really wants to grant this reward to central and western areas, it could not be denied that

“implementing the ‘National Training Plan’ is an important action for improving primary and secondary teachers’ quality, especially rural teachers’ quality. It has significance in fostering equal development of compulsory education, promoting basic education reform and improving education quality” ([2] author’s translation).

In this official document, not only the purposes of initiating the NTP are stated, but also the main problems of teacher professional development in rural China are pointed out, the shortage of financial support, lack of well-directed and systematic guidance, and insufficient academic resources [3–6]. Financial constraint has been consistently argued as one of the major reasons of the poor performance of rural education. According to studies [3, 6–8], the gap of educational expenditure between urban and rural cities is addressed as an important reflection of educational inequity. Teacher quality, however, is addressed as the “chief criminal” for low efficiency in rural areas. Insufficient full time teachers and unqualified teachers are two reasons for students’ poor academic achievements in entrance examinations [3–5, 9]. Nevertheless, as the saying goes, “the world does not hate for no reason”, and this unsatisfactory situation is the result of a series of integrated causes which can be traced from the divergence between policy and practice [10, 11].

As trainers and curriculum developers in NTP hosted by one teacher’s university in Yunnan, the researchers witnessed both the problems and improvements of the Program from 2010 to 2018. Since the training in 2010, the weaknesses in teaching and learning English were revealed among these trainees through the classroom

discussions. Their strong mother tongue accent merges into their Chinglish (Chinese English); their poor English vocabulary results in the “dumb English” phenomenon; and the lack of confidence and necessary disciplinary knowledge lead to teaching English through Mandarin; they cherished the opportunities of the training but were reluctant to make efforts in the training and/or changes in their teaching after they returning to the workplace [12]. Thus, it has become of our first concern to research about their English learning attitudes and motivation to participate in teacher training programs. Meanwhile, their difficulties as qualified English teachers in rural and ethnic minority areas of China were the concerns as well. For instance, would it be more difficult for them to teach English to ethnic minority students? Would ethnic minority teachers have more difficulty in teaching English?

2 Key Concepts of the Study

2.1 Motivation and Adults' Education Participation

Talking about adults' learning motivation theory, it is inevitable to mention Abraham Maslow's Hierarchy of Human Needs Theory, not only for it has been one of the most widely discussed theories of motivation, but also in that it activated studies and researches on learning motivation theories. The basic Hierarchy of Human Needs Theory indicated that human beings had desires influencing their behaviour; only unsatisfied needs would affect behaviour, but satisfied needs could not. Since needs were of various kinds, Maslow grouped them into five categories. Then the needs were arranged in order of their importance, from the basic to the complex, namely, physiological, safety and security, love, self-esteem, and self-actualization. The person advances to the next level of needs only after the lower level need is greatly satisfied. The further the progress up the hierarchy, the more individuality, humanity and psychological health a person will develop.

Building on Maslow's theory and force-field analysis of Lewin, Miller provided the motivational force theory [13]. From the work of Maslow, Miller hypothesized that adults from lower socio-economic classes would participate education for job-related and basic skill reasons, whereas participants from higher social classes would seek education to satisfy achievement and self-realization needs. Moreover, Cross presumed a tendency that “members of the lower social classes will be interested primarily in education that meets survival needs, mostly job training and basic adult education, while the upper social classes will have fulfilled those needs and will seek education that leads to achievement and self-realization” [14]. This tendency was related to one's place in the life cycle as well: younger people would be more interested than older people in achieving economic security [15]. If these presumptions were correct, teachers with lower level of income would be more interested in participating in training for getting higher economic security. However, in-service training is part of teacher professional development; economic security might be one reason for participation but there are other factors, such as working environment, and recognition for achievement.

Herzberg's "satisfiers-dissatisfiers" theory of motivation concluded that some factors (i.e., pay, working condition, supervision, interpersonal relationships, company policy, and administration) could cause employees' dissatisfaction, but even when the conditions complained about were corrected, they contributed very little to job satisfaction. Conversely, while the presence of other factors (i.e., achievement, recognition for achievement, intrinsic interest in the work, responsibility, and advancement) produced satisfaction, their absence caused very little dissatisfaction. That is to say, changing economic related factors has little effect on employees' satisfaction in their work, but their self-realization is the main factor of their job satisfaction. Regarding teachers, low income might cause them to be unsatisfied with the teaching career; nevertheless, the "satisfiers-dissatisfiers" theory suggests that in specific conditions, professional development needs outweigh economic security needs.

Talking about the five kinds of needs discussed in Maslow's hierarchy, there is a tendency for low-level ones (physiological, safety and security) to be external oriented and high-level ones (love, self-esteem, and self-actualization) to be internal oriented. Hence, considering Herzberg's "satisfiers-dissatisfiers" theory, Maslow's hierarchy can be put in another way that when external needs are satisfied, people tend to pay more attention to internal ones. Teachers' motivation in in-service training or professional development, in this case, is more related to internal needs. To study this kind of needs, the focus should be on the relationship between learners' internal psychological factors and the external environment in which the learning appeared. Houle's typology [16] and Boshier's congruence model [17–19] presented a social cognitive viewpoint for this research to test secondary school teachers' in-service training motivation.

In examining adults' motivations to learn, Houle conducted a very influential study. Through a study of 22 adult learners, he was able to identify three distinct groups of learners in terms of their motivation to learn. (1) Goal-oriented learners use learning to achieve very specific objectives, such as learning how to deal with stress or planning for retirement. They tend to be practical in outlook, turning to any readily available source for the information and instruction they need. (2) Activity-oriented learners value the activity itself. They pursue learning in order to escape boredom or to make social contacts. (3) Learning-oriented learners value learning for its own sake; they see learning as a way of staying mentally alert and tend to learn throughout most of their lives.

Following Houle typology, from 1971 to 1991, Roger Boshier made efforts in developing the Education Participation Scale (EPS) on account of his congruence model. Boshier believed that motivation for learning was a function of the interaction between internal psychological factors and external environmental factors. The discrepancy between participants' (students') self-concept and other aspects of the educational environment will directly result in the participation or dropout of adult education. Based on his test, Boshier found out that students with high incongruence scores are significantly more likely to drop out than other people are [14]. Hence, according to Boshier, it is important to provide suitable educational environments for students. At the same time, Boshier suggested that self-esteem of the individual [19], a kind of high-level need in Maslow's hierarchy, was important for educational participation. Those who evaluated themselves negatively were less likely to experience congruence with the educational environment.

As lifelong learners in their professional life, teachers will be continuously confronting various in-service training programs. As far as Boshier's congruence model is concerned, learners' motivations or orientations in participating in all kinds of training were deeply interrelated to their educational environment. Consequently, the strength of their motivation would be the basic and key factor to the final efficiency of the training program. In my study, Boshier's EPS was used to test trainees' educational participation strength and the results would in turn reveal the characteristic of the self-initiated motivational orientations of English teachers in ethnic minority areas of China.

2.2 Attitudes in Language Learning

Kiesler et al. Indicated [20] that Thurstone pioneered the study of attitudes and made a great number of findings. Thurstone [21] defined attitude as the intensity of positive or negative affect for or against a psychological object, and a psychological object was any symbol, person, phrase, slogan, or idea towards which people can differ as regards positive or negative effect. Thurstone theorized that the opinion about an object was not the same as the concept of the attitudes to an object; in that an opinion was simply a display of an attitude, and that opinion could be employed to detect the underlying attitudinal predisposition. On the one hand, opinion was viewed as the expression of an overt belief about an affective reaction; alternatively, attitude consisted of an affective reaction [20, 22, 23].

According to Baker [23], attitude was a hypothetical construct utilized to expound the orientation and persistence of human behaviour. Attitude can be used to predict behaviour but it is invisible and cannot be measured directly. Therefore, attitude is a relatively constant system of evaluative processes toward an object based on what individuals have learned in previous settings. Even though attitudes are relatively constant in individuals, attitudes have been learned. Because attitudes are learned, they may be changed through learning process [20].

Referring to second language learning (SLL), Ellis states that

(L)earners manifest different attitudes toward (1) the target language, (2) target language speakers, (3) the target-language culture, (4) the social value of learning the L2, (5) particular uses of the target language, and (6) themselves as members of their own culture [24].

These attitudes to language are likely to reflect the particular social settings in which learners find themselves. Teachers used to be learners and their attitudes had an impact on the level of their language learning, which ultimately might influence their language teaching methods and professional development as well. In this research, Ellis' six dimensions of language learning attitudes for the following reasons were adopted.

3 Methodology

3.1 Sampling

The sampling of this study is nonprobability in nature, which means the probability of selecting a subject is unknown [25]. Quantitative study was proposed to investigate the trainees who participated in the "Primary and Secondary Schools Leading Teacher

Training Project in Central and Western Rural Areas of China” (one of the two projects in NTP) at one teacher’s university in Yunnan from 2012 to 2014. However, it was impossible for the researcher, within the constraints of time and finance, to collect information from all the teachers trained in the whole. It was a convenience and purposive sampling approach on the basis of the demographic variables regarding teaching subject (English and non-English), ethnicity (ethnic minority and Han people), location of working place (ethnic minority areas), roles in NTP (trainers, trainees and program director), and their proximity to the researcher. The investigation was carried out in three schools of the university, the School of Foreign Languages and Literature, the School of Mathematics and Science, and the School of Chinese Literature. These three schools were responsible for the training of English, Chinese and Mathematics teachers respectively in the NTP. It was proposed that 200 questionnaires would be distributed to 100 English teachers and 100 Non-English teachers.

3.2 Questionnaire Distribution and Collection

Questionnaire sheets were distributed four times when the NTP was taken in 2012 and 2013. About 60 answered questionnaire sheets were collected from two classes at their classrooms immediately after they finished the classes in 2012. As for others, the trainees took the questionnaire sheets back to the dormitory and returned the answered sheets the following day or the day after to their monitors. About 50 were distributed in 2012, and about 100 in 2013. Approximately 200 questionnaire sheets were distributed, and 190 were returned, among which 4 sheets were not fully answered; thus the valid answered sheets were 186.

3.3 Measurement

Questionnaire. The whole questionnaire is given in Chinese to avoid the misunderstanding of the meaning. The questionnaire distributed contains four parts, with sections on personal information, language learning attitudes, teacher efficacy, and education participation. Except for the personal information, the other three parts of the questionnaire are adopted from social cognitive psychology and social linguistic theories [17–20, 24, 26–29].

Personal Information. Personal information contains seven kinds of demographic information, namely gender, age, teaching year, teaching subject, professional title, ethnicity, and mother tongue. For the convenience of data imputing, multiple questions are given in each kind.

Attitudes Towards Languages Learning. Referring to second language learning (SLL), Ellis states that

“(L)earners manifest different attitudes toward (1) the target language, (2) target language speakers, (3) the target-language culture, (4) the social value of learning the L2, (5) particular uses of the target language, and (6) themselves as members of their own culture.” [24].

Gardner and Lambert [30] proposed “if individuals had a strong interest in another language community, or if they had an open appreciation and interest in other languages groups in general, this could make them more open to learning in a second language” [28]. In his socio-psychological model of second language learning [26–28], same as Ellis, Gardner pointed out the importance of interest in foreign languages (not limited to target language but foreign languages in general) and attitudes toward the target group (target language speakers and target language culture). They are also in accordance with the instrumental orientation (social value and particular use) of language learning. However, Gardner emphasized the significance of integrating into target culture by pointing out that individuals who are high in integrative orientation are “willing and able to take on features of another language group as part of their own behavioral repertoire” [28]. Gardner also stated that high integrative orientation doesn’t mean individuals are willing to become a member of the target language culture, because orientation does not equal to identification in his theory. For Gardner, high integrativeness just means students are more open to the foreign culture and willing to do things with features of another language group, such as communicate in other language. He explained that if individuals have strong awareness to their own ethnicity, their integrative orientation is low; if their sense of ethnicity is weak, their integrative orientation is high. The discrepancy here is it is difficult to separate the definition of “integrative orientation” from “identification”. According to social psychology study, cognition, evaluation and conation are three major correlated dimensions or representations of social identity. Identification is greatly represented through the sense of ethnicity, or cognition to the ethnic group or social group. Gardner’s integrativeness can be viewed as conation aspect of social identity. If a person has strong sense of ethnicity, in Gardner’s theory, he would have low integrativeness; however, in social identity theories, strong sense of ethnicity means strong social identity to the ethnic group or social group. Thus, if one person has strong social identity to his own ethnic group, he has weak social identity to other groups, which indicates integrativeness actually has close relationship to identification. Hence, Ellis’ “attitudes to themselves as members of their own culture” and Gardner’s “integrative orientation” are two opposite but correlated aspects of social identity. One is cognition to personal ethnic group, and the other is conation to target language ethnic group (Table 1).

The Attitude/Motivation Test Battery (AMTB) developed by Gardner [26] to access various individual difference variables is based on socio-psychological model. The problem with AMTB is that it not only includes attitudes but also behaviour. Gardner [26–28] believed that highly motivated individuals not only have high attitudes but also study and use the language in their daily life as a manifestation of their motivation. However, Gardner’s AMTB mixed attitude/motivation and motivated behaviour, which makes it harder to “decide the exact nature of the underlying learner trait that the instrument targets” [31]. In this research, emphasis is on individuals’ attitude to target language they are willing to learn, not their actual behaviour in learning the language. Hence, researchers chose five attitudes that mentioned by Ellis’ attitudinal theory and Gardner’s socio-educational model to explore the language attitudes of secondary school teachers.

20 items based on five attitudes (attitude to target language, attitude to target language speakers, attitude to target language culture, attitudes to the social value of

Table 1. Attitudinal dimensions comparison between Gardner and Ellis

Gardner’s AMTB		Ellis
Integrativeness	Interest in target language	The target language
	Attitudes toward the target group	Target language speakers The target language culture
	Integrative orientation	/
	/	Themselves as members of their own culture
	Interest in foreign languages in general	/
Motivation	Attitudes towards language learning	/
	Motivation intensity	/
	Desire to learn the language	/
Attitudes towards language learning environment	Teacher	/
	Classroom	/
Instrumentality	Instrumental orientation	The social value of learning the L2
		Particular uses of the target language

learning the L2, and attitudes to the particular uses of the target languages) are designed to test teachers’ attitudes towards three languages, Chinese, English and ethnic minority languages. For those whose L1 is Chinese, English and ethnic minority languages are considered as target languages. This group of teachers represents a large amount of the total proportion; however, most of them may not learn minority languages in their whole life. Correspondingly, for those participants whose L1 is ethnic minority language, Chinese and English are the target languages.

Education Participation Scale (EPS). The original EPS was published in 1971 by Boshier with 48 items and a 9-point scale, which contained 8 subscales. As time goes by, EPS has been modified for several times, from EPS (F-form) [17] into EPS (A-form) [19], and to EPS (Chinese) [32], which includes 42 EPS items with 6 items for each factor arrayed on the same 4-point scale as the English version. However, factor analysis indicated that EPS (Chinese) and EPS (English) have many differences, e.g. factor loading for certain items are quite low in Chinese samples. Moreover, some items have repeated or overlapped meaning, e.g. make friend and make new friends. Also, some items are aiming at all the population which is not suitable for teachers, e.g. items in Communication Improvement are about improving language ability, but not in relation to a specific language. Hence, to modify EPS (Chinese) for testing teachers is necessary. In this research, researchers focused on Chinese characters relating more to teachers, especially English teachers. Researchers kept items which have high factor

loading both in EPS (English) and EPS (Chinese). At the same time, researchers mingled some items which have similar meaning in Chinese concepts. The researchers also specified all the items in Communication Improvement into improving English ability. Meanwhile, considering the NTP was an in-service training program which did not provide degree or certificate for participants, the training did not have the function of “educational preparation” in EPS. Hence, modified EPS (Chinese Teachers) contained 24 EPS items from 6 factors arrayed on the 4-point scale (from “no influence” to “much influence”).

3.4 Data Analysis Methods

Questionnaire Data Analysis. The collected questionnaire data were analyzed by non-parametric analysis aided by SPSS 20.0.

Descriptive Analysis. Boxplot (known as box-and-whisker diagram) is a non-parametric way of graphically depicting groups of numerical data through the smallest observation (sample minimum), lower quartile (25th percentile), median, upper quartile (75th percentile), and the largest observation (sample maximum).

Correlation Analysis. Spearman’s rho analysis or Spearman’s rank correlation coefficient is a nonparametric measure of statistical dependence between two variables. It assesses how well the relationship between two variables can be described using a monotonic or function. If there are no repeated data values, a perfect Spearman correlation of +1 or -1 occurs when each of the variables is a perfect monotone function of the other. It is often named after Charles Spearman and often denoted by the Greek letter ρ (rho) or as r_s .

Difference Analysis. Two-sample Mann-Whitney Test, Wilcoxon Signed Rank Test and Kruskal-Wallis Test are used for comparison between differences.

Exploratory Factor Analysis (EFA). Exploratory factor analysis (EFA) is aiming at identifying the underlying relationships between measured variables (Norris & Lecavalier 2010) and maximizing the amount of variance explained based on the data (Suhr 2006). EFA allows the researcher having no hypotheses on the number of factors, and items or variables each factor will comprise. EFA is used to test the factor structures of language learning attitudes and modified EPS (Chinese Teachers) in this study.

4 Findings

4.1 General Profiles of the Subjects

As shown in Table 2, 126 female and 59 males are reported. 41.3% of the subjects are aged from 21 to 30, 39.2% are 31 to 40 years old, and 17.7% are over 40 years. 47.3% of the subjects have been teaching over 10 years. Only 10 of the participants have been teaching over 20 years, which doesn’t reach the requirement of minimum samples of group difference. 78.5% are English teachers and the other 21% are non-English

teachers. As mentioned at the Background section, teaching multiple-subjects is one of the facts that teachers are facing in rural or ethnic minority areas due to the shortage of teachers. Hence, though all subjects were chosen from the three schools, teachers who used to teach English would be assigned to join Chinese training, or vice versa, which is one difficulty of teacher in-service training in rural areas of Yunnan.

Table 2. Demographic analysis of gender

		Gender				Total			
		Female		Male		N		%	
		N	%	N	%				
Age	21–30	60	32.2	17	9.1	77	41.3		
	31–40	49	26.3	24	12.9	73	39.2		
	41–50	16	8.6	17	9.1	33	17.7		
Total		125	67.1	58	31.1	183**	98.2		
Professional title	Advanced level	6	3.2	5	2.7	11	5.9		
	Intermediate level	79	42.5	41	22.0	120	64.9		
	Primary level	33	17.7	13	7.0	46	24.7		
Total		118	63.4	59	31.7	177***	95.1		
Teaching subjects	English	105	56.5	41	22.0	146	78.5		
	Non-English	21	11.3	18	9.7	39	21.0		
Total		126	67.8	59	31.7	185*	99.5		
Teaching years	Less than 5 years	44	23.7	9	4.8	53	28.5		
	6–10 years	32	17.2	12	6.5	44	23.7		
	11–20 years	50	26.9	38	19.7	88	41.9		
	Over 20 years	5	2.7	5	2.7	10	5.4		
Total		126	68.2	59	31.8	185*	99.5		

* missing value = 1; ** missing value = 2; *** missing value = 8

Talking about professional title, primary level teachers (24.7%) and intermediate level teachers (64.9%) are the main constituent part. Owing to few samples of advanced-level subjects, group difference analysis of professional level will be conducted only between primary-level and intermediate-level. For the same reason, group difference analysis of teaching years will be conducted only within three groups, namely less than 5 years, 6 to 10 years and 11 to 20 years.

4.2 Language Learning Attitudes

20 items of five attitudinal dimensions, (1) attitude to target language, (2) attitude to target language speaker, (3) attitude to target language culture, (4) attitude to particular use of the language, (5) attitude to social value of target language are designed to test teachers' attitudes towards their second language (L2) or third language (L3). Owing to the fact that some subjects' mother tongue is not Chinese, subjects are asked to choose their attitudes to language learning from the following categories: Chinese, English,

and minority language. Subjects were asked to choose any language which fit the description, such as “I want to learn_ because it represents a civilized culture” (Item 12). Hence, for those Chinese is their L2, they can choose Chinese and/or English; for whose mother tongue is Chinese, they can choose English and/or ethnic minority languages. Each choice of the language is scored 1 and 0 for not chosen. If two languages are chosen, both are scored 1 respectively. If none of the language fits the description, subjects can leave it blank and the data are scored 0 in all categories.

Reliability Test and Exploratory Factor Analysis. Since English is not the mother tongue for all subjects, scores in English are used in the reliability test and exploratory factor analysis (EFA) to test the structure and pattern of the items. With 20 items, Cronbach’s alpha is 0.854 and Guttman Split-Half Coefficient is 0.762 (refer to Table 3). Reliability test shows that the items have high internal consistency, which is suitable for factor analysis.

Table 3. Reliability statistics of language learning attitudes.

Cronbach’s alpha	.854	N of Items	20
Cronbach’s alpha	Part 1	Value	.769
		N of Items	10 ^a
	Part 2	Value	.776
		N of Items	10 ^b
	Total N of Items	20	
Correlation between forms			.621
Spearman-Brown Coefficient	Equal length		.766
	Unequal length		.766
Guttman Split-Half Coefficient			.762

Principal Component Analysis and Varimax with Kaiser Normalization are used in exploratory factor analysis. KMO is 0.856 and Bartlett’s test also shows that data are significant for factor analysis (refer to Table 4). Using Eigenvalues over 1 method, 5 factors were extracted, and the total variance explained was 55.345. Considering Cronbach’s Alpha if Item Deleted, Communalities and the explanation of each factor, 4 items were deleted.

Table 4. KMO and Bartlett’s test.

Kaiser-Meyer-Olkin measure of sampling adequacy	.856	
Bartlett’s test of sphericity	Approx. Chi-Square	1051.917
	df	190
	Sig.	.000

The final Teachers' Language Attitudinal Dimension (TLAD) contains 16 items (refer to Table 5), and the total variance explained was 59.799. Five dimensions of the attitudes are (1) attitudes to target language culture (AC), (2) attitudes to target language speaker (AS), (3) attitudes to target language (AL), (4) attitudes to social value of target language (SV), and (5) attitudes to particular use of target language (PU).

Table 5. Teachers' language attitudinal dimensions (TLAD).

Items		Factors				
		AC	AS	AL	SV	PU
12	I want to learn___because it represents a civilized culture	X				
9	I want to learn___because it represents a great culture	X				
2	I want to learn___because its culture has long history	X				
10	I want to learn___because it represents the culture I favour	X				
6	I want to learn___because people who speak it are knowledgeable		X			
7	I want to learn___because people who speak it have great fortune and in high status		X			
8	I want to learn___because people who speak it are respectable		X			
1	I want to learn___because I want to study it			X		
4	I want to learn___because I like it			X		
3	I want to learn___because it is beautiful			X		
15	I want to learn___because it can let me communicate with people from different cultures				X	
20	I want to learn___because it can satisfy some of my personal needs				X	
16	I want to learn___because it can make me knowledgeable				X	
19	I want to learn___because my leaders arranged it					X
17	I want to learn___because it can help me deal with my work better					X
18	I want to learn___because it can help me improve my teaching proficiency					X

① X indicates the item is loaded in that factor. AC = attitudes to target culture; AS = attitudes to target language speaker; AL = attitudes to target language; SV = attitudes to social value of learning the target language; PU = attitudes to particular use of target language.

② The order of the items are based on the rotated component loading of each item in the factor in from high to low.

Distribution and Strength of English Learning Attitude. Guttman scaling is used to test the strength of attitudinal dimensions. Guttman scaling allows researchers to simply see a series of subjects’ responses which belong to the same dimension in a simple “K+1” scales (K is the number of questions). By scoring each answer 1 (correct answer) or 0 (wrong answer) and then summing up all answers in the same dimension can get the general results for this category. Consequently, it becomes easier for comparative discussion when many possibilities exist.

General English Learning Attitude (GELA). Skewness value ($-1 < -0.566 < 1$) indicates a normal distribution of general English learning attitude (GELA). Median value ($0.2110 > 0$) shows that in average participants have positive attitudes to English learning (refer to Table 6). However, the distribution of data shows that many participants have negative attitudes (Z score < 0) (refer to Fig. 1). Detailed analyses on five English learning attitudinal dimensions will reveal more findings.

Table 6. Descriptive Analysis of GELA.

Z score of GELA	Median	Range	Skewness	Percentile			N
				25 th	50 th	75 th	
	.2110	4.2417	-.566	-.5844	.2110	.7412	186

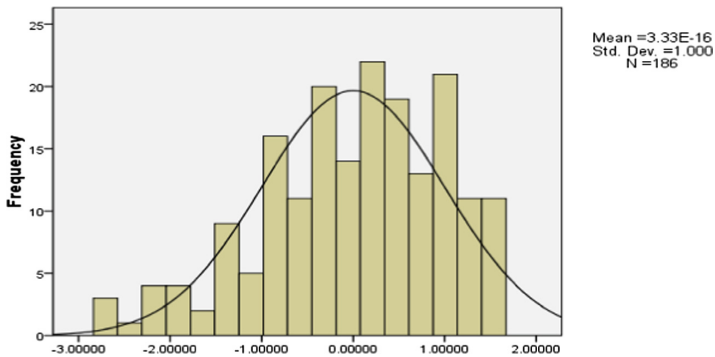


Fig. 1. Histogram of GELA

Five English Learning Attitudinal Dimensions. Descriptive analyses of five attitudinal dimensions imply more obvious differences. Skewness value suggest that attitudes to social value and English (SVE) and attitudes to particular use of English (PUE) have left-skewed distribution, while the other three have normal distribution (refer to Table 7). As mentioned before, left-skewed distribution shows most participants have positive attitudes. Boxplot graph will imply more findings.

Table 7. Descriptive analysis of five English learning attitudinal dimensions.

	ZAEC	ZAES	ZAEL	ZSVE	ZPUE	N
Median	-.4433	.0254	.0980	.6275	.7440	186
Skewness	.321	-.639	-.401	-1.561	-1.273	
Range	2.8678	2.8370	2.8777	3.3347	3.0982	
Percentiles	25	-1.1602	-.9203	-.8612	-.4841	-.2887
	50	-.4433	.0254	.0980	.6275	.7440
	75	.9906	.9711	1.0572	.6275	.7440

Z = Z score; AEC = attitudes to English culture; AES = attitudes to English speaker; AEL = attitudes to English language; SVE = attitudes to social value of English; PUE = attitudes to particular use of English

Boxplot of five English learning attitudinal dimensions (refer to Fig. 2) suggests the following findings. Firstly, in general, most participants have negative attitudes to learning English because of its splendid culture (AEC) (Median = $-0.4433 < 0$, refer to Item 2, 9, 10, and 12 in Table 6) but positive attitudes to the other four dimensions. Secondly, the minimum value in AEC is the same as the 25th percentile value, which indicates 25% of participants have similar negative attitude to English culture. Thirdly, the maximum values in attitudes to English speaker (AES) and attitudes to English language (AEL) are the same as their 75th percentile values, which implies 25% of participants have similar positive attitude to AES and AEL. Fourthly, though there is single case at low score, the median value and maximum value of the majority are the same in SVE and PUE, which also indicates more participants have positive attitudes to SVE and PUE.

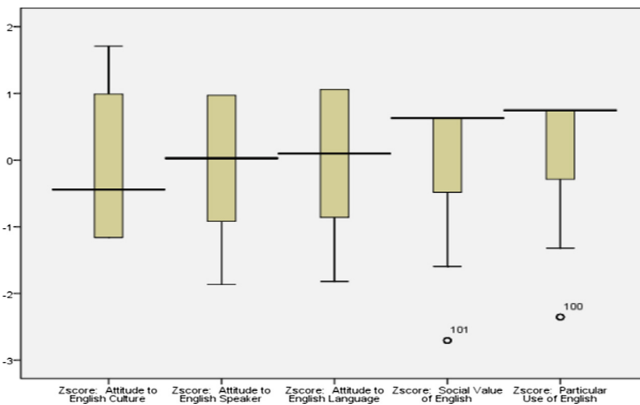


Fig. 2. Boxplot of five English learning attitudinal dimensions.

Spearman Correlation Analysis of English Learning Attitudes. Spearman’s rho analysis (refer to Table 8) shows that the five dimensions of attitudes all have significant positive correlation to general attitudes to English learning. However, among the

five, attitudes to English culture ($r_s = .773$) and attitudes to English language ($r_s = .725$) are more related to the general attitudes to English learning. This indicates that either positive or negative attitudes towards English culture and/or English language will increase or decrease their general attitudes towards English learning.

Table 8. Spearman correlation analysis of English learning attitudes.

Spearman's rho	GELA	AEC	AES	AEL	SVE	PUE	Number of cases
	r_s	.773**	.687**	.725**	.601**	.561**	186
	Sig. (2-tailed)	.000	.000	.000	.000	.000	

**Correlation is significant at the 0.01 level (2-tailed).

AEC = attitudes to English culture; AES = attitudes to English speaker; AEL = attitudes to English language; SVE = attitudes to social value of English; PUE = attitudes to particular use of English; GELA = general English learning attitudes

4.3 Education Participation Motivation.

24 items of modified EPS (Chinese) are adopted from Boshier et al.'s EPS (Chinese) [32] and contain only six subscales of the original seven. The six factors are Communication Improvement, Social Contact, Cognitive Interest, Professional Advancement, Social Stimulation and Family Togetherness. A four-point Likert scaling is used in correspondence with CTSE for further analysis. Items were coded so no influence = 1, little influence = 2, moderate influence = 3, and much influence = 4. Because each of the six factors contains 4 items, a minimum scale score is 4 (suggesting low influence) and maximum scale score is 16 (suggesting high influence).

Reliability Analysis. EPS (Chinese Teachers) data were secured from 186 subjects participated in the National Training Plan. Reliability analysis (refer to Table 9) shows that the 24 items of modified EPS (Chinese Teachers) have high internal consistency (Cronbach's alpha = 0.859). Five of the six sub-scales have Cronbach's alpha over 0.60, but the Cronbach's alpha of Professional Advancement is 0.588.

Table 9. Reliability test of EPS (Chinese Teachers)

	EPS (Chinese Teachers)	CIIm	SC	CIIn	PA	SS	FT
Cronbach's Alpha	.859	.899	.801	.736	.588	.640	.768
N of items	24	4	4	4	4	4	4

CIIm = communication improvement; SC = social contact; CIIn = cognitive interest; PA = professional advancement; SS = social stimulation; FT = family togetherness

Strength of EPS. Because each of the six factors contains 4 items, a minimum scale score for each factor is 4 (suggesting low influence) and maximum scale score is 16 (suggesting high influence). Mean value of the six factors is computed to show the general strength of educational participation. Main focus of this study is on English

teachers, so data used for the following studies are 146 English teacher subjects. Generally speaking, subjects have weak educational participation strength (Mean = 9.6923). Subjects are strongly motivated by communication improvement (Mean = 13.25), cognitive interest (Mean = 12.95) and professional advancement (Mean = 11.65). However, they are weakly motivated by social contact (Mean = 7.25), family togetherness (Mean = 6.67) and social stimulation (Mean = 6.39). Of the six motivational orientations, subjects are comparatively highly motivated by cognitive interest (Mean = 12.95), same as samples in Shanghai and Vancouver [32]. Distribution of social stimulation shows a right-skewed tendency, indicating most subjects are low motivated by social stimulation in their educational motivation in NTP (refer to Table 10).

Table 10. Descriptive analysis of EPS strength

	N	Mean	SD	Skewness		Spearman's rho
				Statistics	SD	
General EPS	146	9.6923	1.50496	.259	.201	/
Communication improvement	146	13.25	2.316	-.797	.201	.592**
Social contact	146	7.25	2.720	.822	.201	.604**
Cognitive interest	146	12.95	2.293	-.601	.201	.615**
Professional advancement	146	11.65	2.166	-.026	.201	.729**
Social stimulation	146	6.39	2.226	1.132	.201	.507**
Family togetherness	146	6.67	2.508	.897	.201	.599**
Valid N (listwise)	146					

**p < .01

Spearman's rho coefficient test shows that Professional Advancement has the strongest correlation to the general EPS ($r_s = .729$, $p < .01$). Cognitive interest ($r_s = .615$, $p < .01$) and social contact ($r_s = .604$, $p < .01$) have significant high correlation to the general EPS. Social Stimulation has the weakest correlation to general EPS ($r_s = .507$, $p < .01$).

4.4 Correlations Between English Learning Attitudes ELA and EPS

Studies in second language acquisition (SLA) have gradually accepted that attitudes play an important role in forming individual's English learning motivation [24, 26, 28, 33]. English learning motivation is theoretically constructed on the general learning motivation theories, which means English teachers' English learning attitudes, which influence English learning motivation, will consequently affect their in-service training motivation. However, to what extent and in what ways can English learning attitudes make the influence? Correlation matrix between ELA and EPS can provide a general view of their relationships.

Spearman's rho analysis (refer to Table 11) shows that in the primary level general English learning attitudes do not have significant correlation with general educational

participation strength, but general English learning attitudes have stronger positive relationship to communication improvement ($r_s = .204, p < .05$) and cognitive interest $r_s = .204, p < .05$).

Table 11. Correlation between English learning attitudes and EPS.

		GEPS	CIm	SC	CIn	PA	SS	FT
GELA	Correlation coefficient	.110	.204*	-.002	.204*	.112	-.046	-.026
	Sig (2-tailed)	.187	.013	.983	.013	.179	.581	.759
AEC	Correlation coefficient	.025	.135	-.037	.108	-.059	-.021	-.030
	Sig (2-tailed)	.763	.105	.661	.195	.482	.802	.723
AES	Correlation coefficient	.083	.145	-.013	.176*	.186*	-.090	-.075
	Sig (2-tailed)	.317	.081	.878	.034	.024	.278	.367
AEL	Correlation coefficient	.286**	.278**	.156	.290**	.265**	.027	.095
	Sig (2-tailed)	.000	.001	.060	.000	.001	.749	.254
SVE	Correlation coefficient	-.014	.043	-.180*	.155	.090	-.108	-.032
	Sig (2-tailed)	.863	.610	.030	.062	.281	.195	.704
PUE	Correlation coefficient	.003	.026	.024	-.075	-.065	.006	.026
	Sig (2-tailed)	.972	.756	.772	.370	.435	.939	.758
N	146							

GELA = general English learning attitudes, AEC = attitudes to English culture, AES = attitudes to English speaker, AEL = attitudes to English language, SVE = attitudes to social value of English, PUE = attitudes to particular use of English, GEPS = general educational participation strength, CIm = Communication Improvement, SC=Social Contact, CIn = Cognitive Interest, PA = Professional Advancement; SS=Social Stimulation; FT = Family Togetherness; GEPS = General EPS. * $p < .05$ (2-tailed), ** $p < .01$ (2-tailed)

Considering the secondary level, some dimensions of English learning attitudes can influence English teachers’ educational participation strength to some extent. First of all, among the five dimensions of English learning attitudes, attitudes to English language (AEL) is the most important factor that determine English teachers’ in-service training motivation ($r_s = .286, p < .01$). Meanwhile, it positively affects teachers’ communication improvement needs ($r_s = .278, p < .01$), cognitive interests needs ($r_s = .290, p < .01$), and professional advancement needs ($r_s = .265, p < .01$). Attitudes to English speaker (AES) is another factor that has positive influence to professional advancement needs ($r_s = .186, p < .05$). Social value of English (SVE), on the other hand, has significant negative relationship to social contact (SC) needs ($r_s = -.180, p < .05$).

It is likely that learning English cannot bring English teachers stronger motivation for social needs. Table 11 indicates that English learning attitudes have negative relationship with social contact, social stimulation and family togetherness needs. Attitudes to English culture, attitudes to English speaker, and social value of English all contribute to these negative influences.

5 Conclusion

In conclusion, through literature review and profound interview, researchers found out three major results.

5.1 Attitudes to English Language Contribute Most to the Motivation on in-Service Training

Some studies claim that attitude consists of an affective reaction. Attitude to the social value of a target language is a determinate cause for subjects' general desire for learning that language. Baker even proposed that attitude could be used to expound upon the orientation and predict the persistence of human behaviour [23]. In this investigation, attitudes to English language learning contribute most to the motivation in teacher training programs, particularly in three orientations of education participation, namely cognitive interests, communication improvement, and professional advancement.

The reasons for this might be related to the measurement used for testing teachers' education motivation being modified in relation to some distinctive needs of English teachers, such as four items in communication improvement. In the mean time, the three items (Item 1, 3, 4, refer to Table 5) chosen to test language-learning attitudes indicate strong individual affection towards the target language. Moreover, teachers' motivation in cognitive interests, communication improvement, and professional advancement were highly correlated to the general strength of education participation; thus like a chain reaction, direct connection to any one would affect its influence on others. In addition, this result implies the tendency that increasing individuals' feeling about the target language would probably stimulate them more to participate in the in-service training program.

5.2 Attitudes to English Speaker Have Considerable Effect on the Motivation in Professional Advancement and Cognitive Interests

Gardner's socio-psychological model of second language learning suggested that a positive relationship exists between learners' motivation in learning a language and their interests in the target language community, in other words their attitudes to English speakers and English culture. Data indicated that the correlation between subjects' feelings about English speaker and their motivational orientation regarding professional advancement and cognitive interest were insignificant (refer to Table 11), though data suggested that subjects have similar weak attitudes to English speaker and English culture.

Possible reasons would be that three items used to test attitudes to English speakers might in fact demonstrate some requirements of Chinese *Shi De* (teaching ethics), the commanding element of the professional teacher in the Chinese concept. "Knowledgeable", "great fortune and high status" and "respectable" (Item 6, 7, and 8 respectively, refer to Table 5) have been necessary characteristics of a professional teacher characterized by Confucian sages. Although teachers' current financial

conditions were not particularly sound, they seem to be longing for the ideal position of intellectuals. Thus, their feelings towards English speakers that are “knowledgeable”, “(having) great fortune and high status” and “respectable” correlated to their needs in cognitive interests and professional advancement; in other words, in the process of pursuing professional development, their beliefs about professional teachers are unintentionally revealed through their attitudes to English speakers.

5.3 Instrumental Attitudes to English Lead to Pragmatic Needs in Teacher Training

As stated before, studies show that in foreign language learning contexts, instrumental motivation would be stronger rather than integrative one due to the exposure of learners to the target language community being very limited. Data suggest that subjects have considerably strong attitudes to the social value and particular use of English, which are instrumental-oriented attitudes in nature. Moreover, their attitudes to the social value of English have significant negative correlation to the social contact orientation of training motivation ($r_s = -.180, p < .05$), which implies that the stronger instrumental attitudes to English they hold, the weaker their desire to participate in the training for interpersonal connections. In addition, similar to their attitudes to the social value of English, attitude to English culture presents negative correlation to social contact and social stimulation orientations of in-service training as well.

The reasons would be, firstly, the training was happening in a Chinese context, thus interpersonal connection would merely be with Chinese people rather than English speakers. In this circumstance, the attitude to social value of English had little connection to their desire for communicating with Chinese people. For the same reason, their attitudes to English culture present a similar tendency to their motivation in interpersonal connections through in-service training.

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