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Language attitudes: construct, measurement, and associations with language achievements

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ABSTRACT

The article reports on the development and validation of a new scale for assessing attitudes towards multiple languages among multilingual students from Enshi Tujia and Miao Autonomous Prefecture, China. The *Language Attitudes Scale-Student Form* (LASS) was developed based on relevant theory and literature as well as interview data from four students and four language teachers. The LASS consists of 40 items, with ten measuring students' attitudes towards their dialect, ethnic (minority) language, Putonghua, and English, respectively. The LASS was validated among 5,237 students of seven schools from the elementary level to the tertiary level. The participants were mainly from Han ($n_1 = 1,827$) and two ethnic minority groups of Tujia ($n_2 = 2,242$) and Miao ($n_3 = 886$). The traditional triadic (cognition-affect-behaviour) model of language attitudes was generally supported across ethnic groups, languages, and educational levels. A series of validity tests and reliability tests were conducted, showing that the LASS was psychometrically sound. In addition, the predictive effects of language attitudes in self-perceived language proficiency and real language achievement were also confirmed to a large extent, highlighting the need to include language attitude as an important individual difference factor for language learning.

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Language attitude; *Language Attitudes Scale-Student Form* (LASS); ethnic minority groups; Tujia; Miao; English as a foreign language

Introduction

Language attitude is an important construct extensively studied in sociolinguistics for its important role in identity construction, language maintenance, bi/multilingualism, language planning and policy, to name a few areas (Garrett 2010; Salmon and Menjívar 2019). It has long been considered to be a triad of cognitive, affective, and behavioural components (Dragojevic 2016; Garrett 2010). However, the long-held tripartite model remains to be empirically and statistically supported across groups and language varieties. We thus raise the central issue concerning its conceptualisation: What is language attitude and what is the underlying structure?

Language attitude has been assessed using a wide range of methods. Likert scales have been popular in language attitude research mainly for their convenience and accessibility to participants. However, little is known about the development and validation process of extant measures for language attitude. We thus raise the second issue concerning its measurement.

Language attitude has been argued as an important factor influencing L2 (second language and foreign language) learning (Artamonova 2020; Salmon and Menjívar 2019). In contrast with

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sociolinguistics research, in the field of second language acquisition (SLA), language attitude has not been captured sufficiently in its own right. Instead, it has been attended to only as an integral part of motivation (Artamonova 2020; Gardner 1985a, 1988a; Gardner and Lambert 1972; Masgoret and Gardner 2003). It remains to be explored what is the underlying structure of an individual's attitude toward his or her target L2. In addition, although argued as an important construct in SLA (Artamonova 2020; Salmon and Menjivar 2019), there is little empirical evidence for whether and how an individual learner's attitude towards L2 contributes to his/her L2 achievement, which is of central importance in SLA research. The language attitude-achievement link is the third issue we raise.

To address the three issues raised above, we developed the *Language Attitudes Scale-Student Form* (LASS), cross-validated it among multilingual students, and applied it to examine language attitude-language achievement links. The participants of the current study were from Han, Tujia, and Miao ethnic groups at different educational levels (from the elementary to the tertiary educational level) from an ethnic minority autonomous prefecture in China. The languages (varieties) involved were their dialects, ethnic (minority) languages (i.e. the Miao and Tujia languages), Putonghua, and English.

Language attitudes: construct and scale measures

In line with the tripartite model of attitudes in social psychology, language attitudes are generally defined as a set of beliefs, feelings, and behavioural intentions towards different language varieties (Dragojevic 2016). Likert rating scales have long been used to measure language attitudes (Soukup 2013) and the following concerns can be summarised. Firstly, although many studies have adopted the tripartite definition of language attitude, the scale measures do not represent the conceptual structure correspondingly. That is, there is a discrepancy between conceptualisation and measurement of language attitude. Secondly, regarding scale development, there has been an overall lack of transparency. For example, what are the sources for the generation of item pools? (Bourhis 1983; Dewaele et al. 2018; Qu 2017; Xie and Cavallaro 2016). How are the items developed or modified? (Ng and Zhao 2015; Yang 2016). Rezaei, Latifi, and Nematzadeh (2017) is an exception that has provided the development process relatively transparently. However, the psychometric properties were not assessed or at least not reported. This leads to our third concern about the validation of language attitude measures: To what extent are the extant scale measures valid and reliable? As mentioned, language attitudes have been defined as a three-factor construct. However, it is surprising that few empirical studies have statistically validated the prior theoretical model using confirmatory factor analysis or other alternatives. In addition, a considerable number of empirical studies have applied certain scale measures to examine the profiles of language attitudes of certain groups without reporting any psychometric properties of the measures (e.g. Li 2022; Ng and Zhao 2015; Qu 2017; Xie and Cavallaro 2016; Yang 2016). However, ideally, the following validity and reliability should be assessed for newly-developed scales: Construct validity, discriminant validity, convergent validity, criterion validity, predictive validity, internal consistency, and item-total correlation (Dörnyei and Dewaele 2023).

Of note, there are a few studies that have reported the construct validity of language attitude scales and thus described the underlying structure of language attitude. For example, Ting and Puah (2015) revealed different factors of language attitudes among Foochow ($n = 150$) and Hokkien ($n = 150$) participants in Malaysia using exploratory factor analysis (EFA). The four factors for Foochow participants were: (1) Instrumental value of Chinese languages, (2) embarrassment for not speaking Chinese languages, (3) Chinese dialect as ethnic marker, and (4) reasons for importance of Chinese dialect. For Hokkien participants, another two factors were obtained, namely, (5) importance of Mandarin for children and (6) Mandarin ability and use. The limitation is apparent: all the factors (except Factor 3 and Factor 4 for Hokkien participants) were assessed with only two items. However, psychometrically, a factor should be assessed with at least three items (Hair et al. 2010).

Furthermore, the factor structures identified do not support the tripartite model of language attitudes. In another study by Bekker (2004) ($n = 100$) based in South Africa, a three-factor model for language attitudes was obtained using EFA: (1) Domain-specific practical issues, (2) a generally negative or positive attitude towards English, and (3) the presence or absence of an integrative attachment to the African languages. The finding also refutes the traditional tripartite model of language attitudes. In a recent study, Wei, Jiang, and Kong (2021) developed and validated a 12-item scale, with four items measuring attitudes towards the ethnic language, Putonghua, and English, respectively. The validation was conducted among 310 Chinese Mongolian university students. Although exploratory factor analyses (EFAs) were used to explore the factor structures, there were no further confirmatory factor analyses (CFAs) to confirm the structures. In addition, only four items were used to assess attitude towards a certain language, leaving the conceptualisation of language attitude a challenge. In another recent study, Artamonova (2020) developed and validated a 28-item *Language Attitude Questionnaire* based on the data of 127 Spanish majors in the US. A three-factor model was obtained using principal component analysis (PCA): (1) Attitudes toward multilingualism, (2) attitudes toward language learning, and (3) attitudes toward Spanish. The three-factor model statistically supported was also incongruent with the classic triadic model although the triadic model was used as the theoretical framework.

The four studies converge to show that people from different linguistic groups may have different conceptualizations of language attitudes, necessitating the current inquiry. Although the four studies have their strengths in that they reported the construct validity and reliability, the following weaknesses are apparent as well. Firstly, the sample sizes were relatively small for scale validation. Secondly, the statistical methods used to check the construct validity or the underlying structures of language attitudes were problematic or at least not sufficient. For all the studies, CFA should be further conducted to confirm the structure obtained in the EFA family including PCA. Alternatively, CFA should be performed directly instead of EFA or PCA in those studies where the scales were developed based on a priori hypothesised three-factor model (Kline 2010). In other words, although the classic triadic model of language attitudes has been widely agreed on by sociolinguists, it has not yet been sufficiently or statistically corroborated. It is thus necessary to cross-validate the theoretical model among different groups of language learners and users. Thus, in the present study, we seek to testify the tripartite model by cross-validating it among students at different educational levels from different ethnic groups.

Language attitudes and language achievements

Attitude towards language has long been recognised as a crucial factor in the process of learning and teaching a language (Saeed et al. 2014; Smith 1971). As Huguet (2006) argued, 'language learning will rarely occur if subjects do not show positive attitudes to the language in question and the lessons where it is taught' (p.414). This may be explained by the four-step formation of student language (learning) attitude (Smith 1971). The first step is the cognitive process: a student perceives and develops a concept of a language and the language class. Then, there is the affective process: The student develops certain feelings (excitement, happiness, confidence, adequacy, boredom, frustration, anger, and inadequacy) in response to their perceptions of the language and language class. The next step is the evaluation of these feelings. Lastly, the evaluations are translated into certain behaviours. In other words, the student behaves in accordance with his or her attitudinal evaluations of the language and language class. This indicates that language attitude is acted out as learning behaviour, which is a determinant of scholastic achievement (Schaefer and McDermott 1999). In addition, Smith (1971) also pointed out that language attitude is linked to motivation (instrumental or integrative) and emotion (positive or negative), both of which have been evidenced as significant factors of language achievement (Botes, Dewaele, and Greiff 2020; Li and Wei 2022; Masgoret and Gardner 2003). All these point to the potentially important role of language attitudes in affecting language learning outcomes at the conceptual level.

In the case of second or foreign language (L2) learning, research on attitudes towards language has been greatly influenced by Gardner's (1985b) classic theoretical model. In the socio-educational model, attitude towards the language learning situation and intergrativeness are two attitudinal factors that are influenced by cultural beliefs and influence motivation. Motivation interacts with language attitude in formal or informal language acquisition contexts to influence linguistic or non-linguistic outcomes. The ambiguity is apparent between motivation and attitude at the conceptual level in this model. In addition, as operationalised in the *Attitude and Motivation Test Battery* (Gardner et al. 1979), attitudes towards target foreign language (FL), FL users, FL teachers, and courses are measured as factors of integrative motive along with other motivation constructs. The concept, measurement, analytical or methodological confusions may explain why relevant results obtained from research on attitudes and motivation and L2 learning outcomes are ambiguous or inconsistent (Au 1988; Gardner 1988a, 1988b). In a meta-analysis ($k = 51$) (Masgoret and Gardner 2003), attitudes towards the language learning situation were found to be significantly related to three different achievement measures, i.e. grades ($r = .24$), objective measures ($r = .17$), and self-ratings ($r = .26$).

Taking together, the current study seeks to provide evidence for the language attitudes-language achievements based on psychometrically sound measures of attitudes towards different languages in accordance with a clear definition and operationalisation of language attitudes.

The current study

The following gaps can be summarised based on the review of previous language attitudes studies. Firstly, language attitudes have been conceptualised and measured distinctively in the two lines of sociolinguistics and SLA research. This makes attitudes towards multiple languages (varieties) of the same groups of learners within a given society incomparable due to a lack of consistent conceptual structure and measurement. This may also block the integration interface for language attitudes between sociolinguistics and SLA research. Secondly, in SLA research, language attitudes have been examined as a component of motivation rather than in their own rights, which has led to the confusion or interchangeable use of the two concepts and ambiguous results. Thirdly, there is an inconsistent picture concerning the link between language attitudes and language achievements. To these ends, the present study seeks to (1) investigate how the same group of people conceptualise attitudes towards multiple languages (standard and nonstandard language varieties and L2), (2) develop and validate a psychologically sound measurement for language attitudes across languages, and (3) examine the links between language attitudes and language achievements. Specifically, the study focused on Han, Tujia, and Miao students from the elementary to the tertiary level in Enshi Tujia and Miao Autonomous Prefecture in Hubei Province, China, examining their attitudes towards their ethnic languages, dialects, Putonghua, and English. Correspondingly, the study was guided by the following research questions (RQs):

RQ1: What are the underlying structures of Han, Tujia, and Miao students' attitudes towards their ethnic languages, dialect, Putonghua, and English?

RQ2: How valid and reliable is the *Language Attitudes Scale-Student Form (LASS)* across the above-mentioned ethnic groups and languages?

RQ3: How are language attitudes connected to language achievements?

Methodology

The local context

Convenience sampling was adopted. Enshi Tujia and Miao Autonomous Prefecture (hereinafter referred to as 'Enshi') was chosen as the research site of the current large-scale study for the

following reasons. Firstly, it is an autonomous prefecture home to about 30 ethnic groups including Han, Tujia, Miao, Hui, Dong, Mongolian, Yi, and Zhuang, among others. However, this multi-ethnic, multi-lingual, and multi-cultural context has been relatively under-explored. Secondly, it is the only autonomous prefecture in Hubei province of central China where the first author is based in and has access to in data collection. It is located in a mountainous corner of southwestern Hubei, bordering Xiangxi Tujia and Miao Autonomous Prefecture, Hunan province in the south, and Chongqing Municipality in the northwest (see [Figure 1](#)). It has a total area of about 24,000 square kilometres with a population of about 3.8 million. More than half of them belong to Tujia and Miao minorities. It was also home to ten impoverished counties until April 2020.

There are three active languages (forms) used in Enshi, namely the mainstream national language (Mandarin), Enshi dialect (particularly in life domains), and English (particularly in the education domains). Minority languages have been challenged, and Enshi government has issued a series of policies to vitalise them including promoting their visibility on public signage (see [Appendix 1](#)) and in cultural activities (e.g. such as the Baishou Dance, literally 'hand-waving dance', which is the ethnic dance of Tujia; folk game songs; see [Appendix 1](#)).

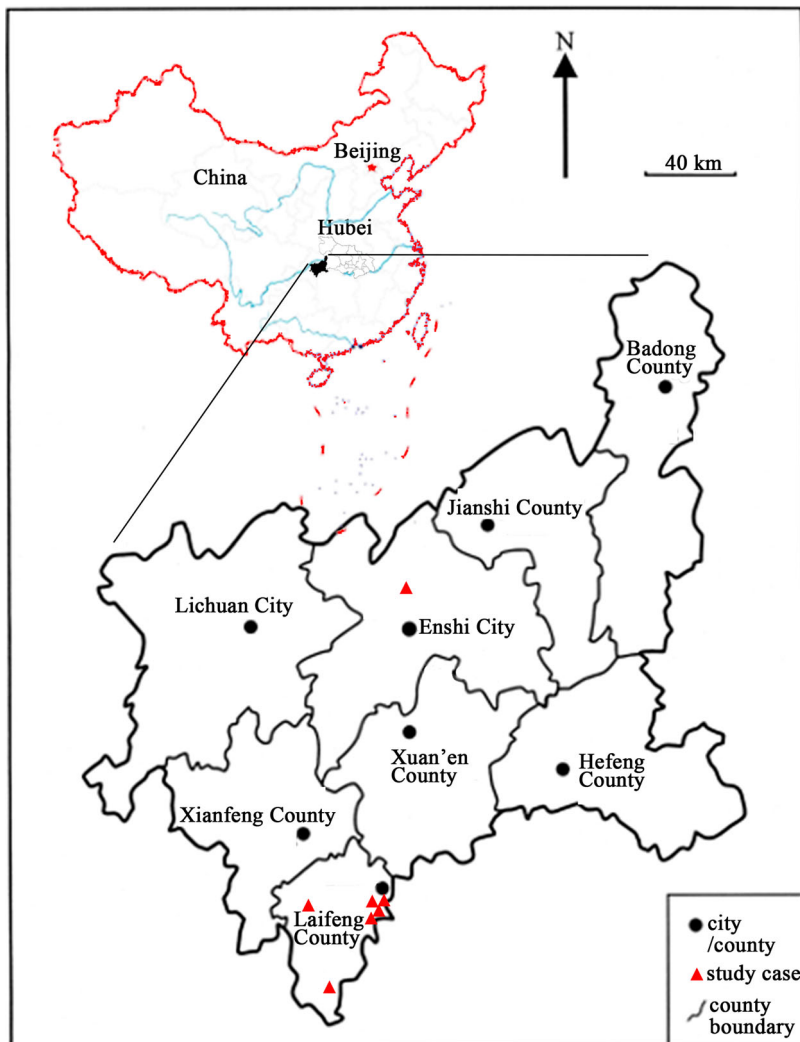


Figure 1. The locations of study cases in Enshi Tujia and Miao Autonomous Prefecture, Hubei, China.

Table 1. Participants and participating schools/university.

School	Type	Location	Level	Female	Male	Others	Tot.
BFS	public	rural	elementary	137	124	5	266
MZ	public	urban	elementary	203	191	5	399
DH	public	rural	junior	336	275	5	616
SY	public	urban	junior	313	319	15	647
GP	private	urban	junior	599	569	6	1,174
GJ	private	urban	senior	559	689	16	1,264
MZU	public	urban	tertiary	366	474	31	871
Tot.	/	/	/	2,513	2,641	83	5,237

Minority language course (e.g. Tujia ethnic language, see [Appendix 1](#)) is also provided in minority ethnic schools like BFS in our current study (see [Table 1](#)).

Participants

Participants in the preliminary interview were four elementary students ($n = 4$) from two schools in rural and urban Enshi and their Chinese ($n = 2$) and English teachers ($n = 2$). Participants in the main questionnaire survey were 5,237 students from two elementary schools, four secondary schools, and an ethnic university in Enshi. Only the university is located in central Enshi, while other schools are located in Laifeng, a county in southwestern Enshi. The numbers of students at the elementary level, the secondary level, and the tertiary level were 665 (12.70%), 3,701 (70.67%), and 871 (16.63%), respectively (see [Table 1](#) for more information). The numbers of students from Han, Tujia, Miao, and other minority ethnic groups were 1,827 (34.89%), 2,242 (42.81%), 886 (16.92%), and 282 (5.38%), respectively. The detailed demographic characteristics (i.e. ethnicity, educational level, school, gender, and age) of the participants are displayed in [Appendix 2](#). A total of 4,355 (83.15%) participants were studying in urban areas including two private boarding secondary schools whose students were originally from both rural and urban areas. The rest 882 (18.75%) participants were from two schools in rural areas, and 75.51% of them (666 out of 882) were left-behind children. Specifically, 38.3% of them (338/882) lived with neither of their parents, both of which worked in distant urban areas, 29.2% of them (259/882) lived with their mothers, and their fathers worked in distant urban areas, 7.8% of them (69/882) lived with their fathers, and their mothers worked in distant urban areas, and only 24.4% (216/882) of them were not left-behind children and lived with both their parents. As for the language tests, 4,026 of the 4,366 non-university questionnaire participants were the examinees.

Instrument

Instruments in the study were interview questions in the preliminary study and a composite questionnaire and language tests in the main study. The composite questionnaire consisted of three sections for demographic information, the *Language Attitudes Scales-Student Form* (LASS) (for ethnic languages, dialect, Putonghua, and English), and self-perceived language proficiency, respectively.

Preliminary interview

Semi-structured interviews were conducted with elementary students and their English and Chinese teachers. The guideline questions were structured along the three theoretical components of language attitudes, namely cognition, affect, and behaviour related to dialect, Putonghua, minority languages, and English. Example questions for the three components are (1) *How do you feel about the utility/status of your ethnic language/dialect/Putonghua/English?* (the cognitive dimension of language attitudes) (2) *What's your feeling towards your ethnic language/dialect/Putonghua/English?*

(the affective dimension of language attitudes), and (3) *When do you expect the use of your ethnic language/dialect/Putonghua/English in your life?* (the behavioural dimension of attitudes).

Language attitudes

We developed the LASS on the theoretical tripartite model of attitude (i.e. Cognition, Affect, and Behaviour) rooted in social psychology (Eagly and Chaiken 1993; Zanna and Rempel 1988) as well as sociolinguistics (Cooper and Fishman 1977; Garrett 2010). The items were generated

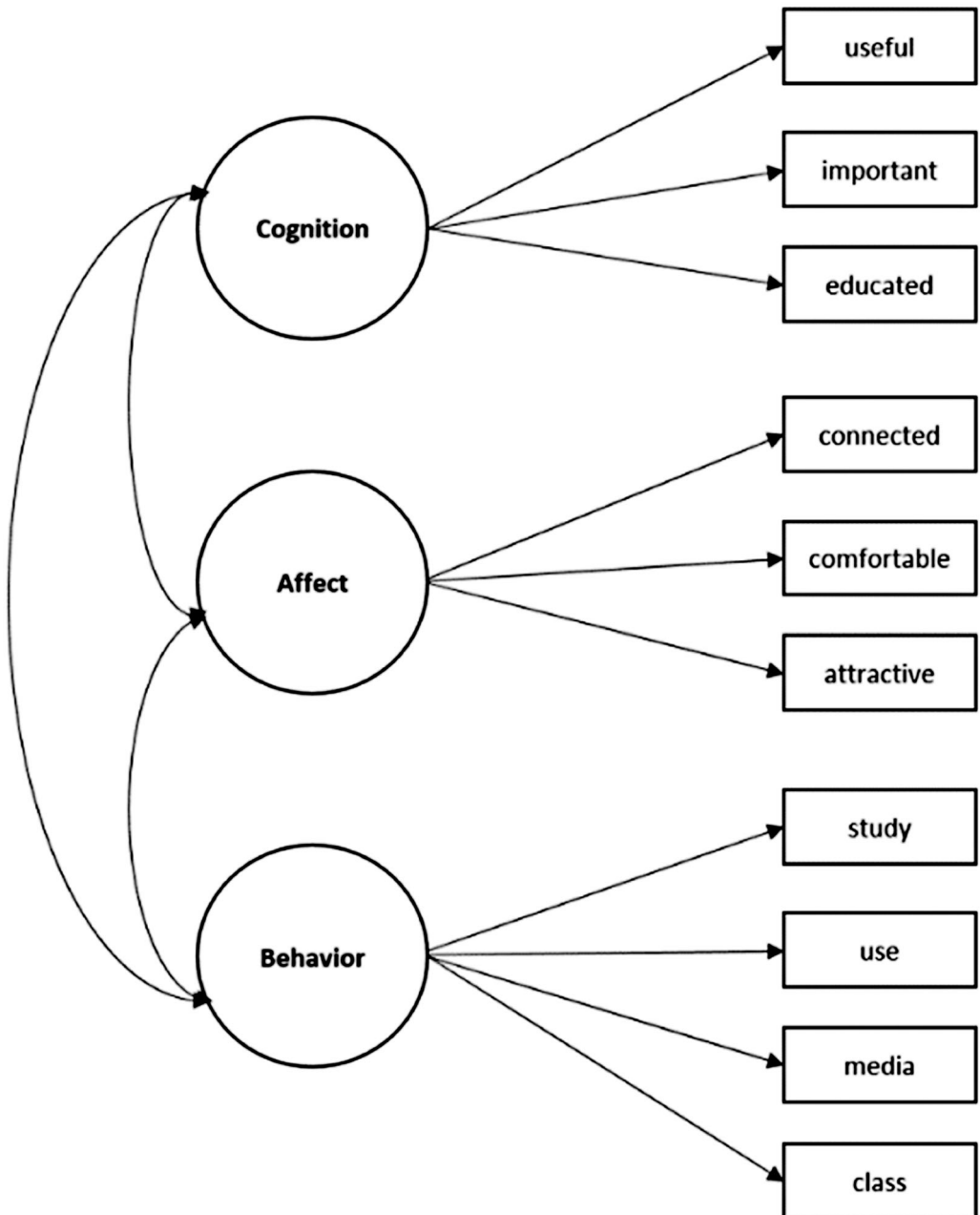


Figure 2. Data collection procedure.

based on the following sources: (1) The interview data collected in the preliminary interview, and (2) items of extant relevant instruments (e.g. Artamonova 2020; Ng and Zhao 2015; Qu 2017). The interview data were qualitatively analyzed to obtain themes as indicators used in the generation of the LASS. For example, the expression of ‘educated’ in the scale item was taken from ‘... the use of English makes me feel myself being better-educated ...’ reported by a student participant.

A parsimonious pool of ten items was determined after experts’ judgment. Three items were used to measure the cognitive dimension, three for the affective dimension, and four for the behavioural dimension (see Figure 2 for the visualised conceptualizations of language attitudes). The items were arranged on a 7-point Likert scale indicating a continuum from a very negative attitude to a very positive attitude, for example, from 1 ‘absolutely useless/unimportant’ to 7 ‘extremely useful/important’ (see Appendix 3 for the scale concerning different languages as well as its sources).

Intended effort

Considering that attitudes have been examined as part of the motivation in L2 research (Artamonova 2020), the intended effort was chosen as a criterion measure in the current study. Taguchi, Magid, and Papi’s (2009) six-item scale, traditionally used in L2 motivation research, was utilised to measure participants’ intended efforts in the languages under discussion. The Cronbach’s alphas were .897 (English) and .877 (Putonghua), respectively.

Language achievements

Language achievements were used as outcome variables to assess the predictive validity of the LASS (RQ3, see Data analyses for more details). Following the practice in scale development and validation literature in applied linguistics (e.g. Teimouri, Plonsky, and Tabandeh 2022), language achievements were operationalised as self-perceived proficiency in different languages (dialect, ethnic language, Putonghua, and English) and final exam scores (Chinese and English). Four items were adopted to assess self-perceived English and Putonghua proficiency in listening, speaking, reading, and writing, following Li (2020), while two items concerning listening and speaking were for dialect and the minority languages. The items were arranged on a 7-point Likert scale from 1 ‘very poor’ to 7 ‘very excellent’. The mean scores of the responses to the four items were used as indicators of self-perceived language proficiency levels. The Cronbach’s alphas were .850, .887, .849, and .896 for dialect, minority languages, Putonghua, and English, respectively. As for English and Chinese exams, the same examination papers were used at the same instruction levels across all schools, which is a tradition in Laifeng county. This ensures that the final scores of participants from different schools were comparable.

Procedures

There were mainly four phases involved in data collection (see Figure 3): (1) Preliminary interview, (2) scale development, (3) questionnaire survey, and (4) language tests.

Preliminary interview

The preliminary semi-structured interviews were conducted in September 2020 through Wechat (a mainstream messaging and calling App in China). The teacher interviewees were recommended by the school principals in the two schools in rural and urban sites. The four six-graders were recommended by the participating teachers considering their different perceived attitudes towards Chinese and English.

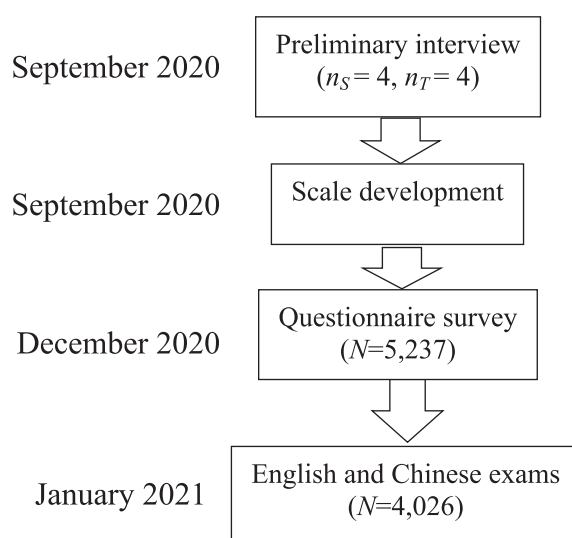


Figure 3. The conceptual structure of student attitudes towards languages. *Note:* T: teachers; S: students.

Scale development

We developed a ten-item *LASS* concerning each language under discussion based on the interview data and relevant existent measures as mentioned previously. Subsequently, three experts in sociolinguistics and applied linguistics were invited to judge the comprehensibility, accuracy, appropriateness, and readability of the *LASS*. Any disagreements were solved after further discussion to achieve desirable face validity.

Questionnaire survey

The questionnaire survey was conducted in December 2020. Traditional paper-and-pen questionnaires were administered to participants at the elementary and secondary levels for the following reasons: (1) the use of mobile phones was not allowed for them; (2) mobile network was not accessible in each classroom; (3) students, especially those in rural areas, may not be accustomed to answering questions on mobile devices or using computers. As for university participants, a web-based questionnaire was used.

Language exams

Chinese and English exams, as part of the final exams, took place in January 2021 in each participating school.

Ethics

For the investigation of elementary and secondary students, official approval was first obtained from the first author's institution, then the local education authority of Laifeng County, Enshi, and its subordinate schools in June 2020. Once the school principals received the official approval from the local education authority, they assigned headteachers in different grades to assist the research team in obtaining consent from the custodians of the participants. Then, the first author, along with her research assistants administered printed questionnaires to each participating school, which were then administered to target students by their headmasters during class to ensure a higher degree of completion. The headteachers also provided the authors with participants' scores in the final English and Chinese exams when the semester was over in January 2021. For university students, a web-based questionnaire was forwarded to the department chair of English Language in

the participating university. Upon censorship, the questionnaire was forwarded to English teachers, who further administered it to their students during class time.

The nature, purpose, and approximate duration of the survey were clarified at the very beginning, followed by the clarification of participants' rights of non-participation and withdrawal from the survey without any undesirable consequences. Considering the correlational nature of the research design in response to RQ3, the participants were required to provide the abbreviations of their names in the questionnaire survey, which were used to match questionnaire data and exam scores and removed from subsequent data analyses.

Data analyses

All the data collected in the main study were digitalised and then checked for the issue of outliers using excel. Missing values were replaced with the mean scores of certain participants in the LASS using SPSS 19.0. In accordance with the first RQ, we conducted a series of confirmatory factor analyses using Mplus 8.3 to reveal the conceptual structures (also termed construct validity) of attitudes towards ethnic languages, dialect, Putonghua, and English. To address RQ2, a series of validity tests (construct validity, convergent validity, and criterion validity), reliability tests (global scale and subscales), item analysis (item variance for the discriminant validity of items), and correlation analyses (item-total correlation for item communities) were conducted to assess the psychometric properties of the LASS. Regarding RQ3, a series of correlation analyses were conducted to examine language attitudes-language achievements links. The links between the target psychological variable and its learning outcomes could also be termed as predictive validity in psychometric assessment (Teimouri, Plonsky, and Tabandeh 2022).

Results

The following section presents results in connection with the three RQs.

Conceptual structures of attitudes towards different languages

Considering that the LASS was developed based on a prior theoretical model, namely the tripartite of cognition, affect, and behaviour, we conducted CFA rather than EFA (Kline 2010) to verify the proposed conceptual model. We performed rounds of CFA using the data of language attitudes

Table 2. Goodness-of-Fit Indices for the three-factor model of language attitudes.

	benchmark	χ^2 /	<i>df</i> /	CFI > .90	TLI > .90	SRMR < .08	RMSEA [95% C.I.] < .10
Whole sample <i>N</i> = 5,237	Dialect	1013.752***	32	.95	.94	.08	.08 [.073, .081]
	Putonghua	1198.530***	32	.95	.94	.05	.08 [.079, .088]
	English	1351.650***	32	.96	.95	.03	.09 [.085, .093]
	Ethnic	1098.405***	32	.97	.96	.03	.08 [.076, .084]
Han <i>n</i> = 1,827	Dialect	449.031***	32	.95	.94	.05	.08 [.078, .091]
	Putonghua	351.059***	32	.94	.92	.05	.08 [.074, .090]
	English	488.071***	32	.96	.94	.04	.09 [.081, .095]
Tujia <i>n</i> = 2,242	Dialect	275.774***	32	.97	.95	.03	.08 [.074, .92]
	Putonghua	324.918***	32	.94	.92	.05	.08 [.082, .099]
	English	968.134***	32	.85	.78	.07	.16 [.153, .170]
	Minority	496.842***	32	.97	.95	.03	.08 [.074, .087]
Miao <i>n</i> = 886	Dialect	118.864***	32	.97	.96	.03	.08 [.064, .094]
	Putonghua	121.643***	32	.95	.93	.04	.08 [.065, .095]
	English	226.117***	32	.88	.84	.06	.12 [.103, .132]
	Minority	135.922***	32	.96	.94	.04	.08 [.071, .101]

Note: *** means significance at < .001 level; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; SRMR = Standardized Root Mean Square; RMSEA = Root Mean Square Error of Approximation

retrieved from different ethnic groups towards different languages. The CFA results are presented, more specifically, model fit indices and factor loadings of all items. Fit indices used are χ^2/df , p , RMSEA, CFI, TLI, and SRMR, and their cut-off values for acceptable model fit are χ^2/df (subject to sample size), $CFI > .90$ (Kline 2010), $TLI > .90$ (Kline 2010), $SRMR < .08$ (Hu and Bentler 1999), and $RMSEA < .10$ (Steiger 1990). Regarding Chi-Square, as pointed out by Hooper, Coughlan, and Mullen (2008), Chi-Square statistic is sensitive to sample size, and thus there is no consensus on its cut-off value especially when the sample size is large. Concerning RMSEA, its cutoff value is generally regarded as .08 in recent years, however, in the present study, we used the less stringent threshold of .10 as an acceptable fit because we also agree that strictly adhering to recommended cutoff values can lead to instances of the incorrect rejection of an acceptable model (Hooper, Coughlan, and Mullen 2008). In the current study, values above .10 indicate a poor fit, values between .08 and .10 indicate a mediocre fit, and values below .08 indicate a good fit following MacCallum, Browne, and Sugawara (1996). In addition, as Brown (2015) pointed out, 'RMSEA may be of less concern if all other indices are strong in a range suggesting 'good' model fit' (p.75). Most importantly, we agree that 'while fit indices are a useful guide, a structural model should also be examined with respect to the substantive theory' (Hooper, Coughlan, and Mullen 2008, 57). Taking together, the appraisal of a model is not simply based on fit indices, but also relevant theory and fact. As for factor loadings of each item, the cutoff value is .40 (Hair et al. 2010).

As displayed in Table 2, the three-factor model in Figure 4 was generally supported in the whole sample across four languages (varieties) (see Figures 4–7). That is, language attitudes were consistently conceptualised as a three-dimensional construct: Cognition, affect, and behaviour. By contrast, a closer look at the attitudes of Tujia students and Miao students towards English shows that the tri-factor model was not sufficiently supported.

When the data of different ethnic groups were mixed ($N = 5,237$), the factor loading ranges of items in the LASS for dialect, Putonghua, and English were [.443, .856], [.522, .891], and [.636, .918], respectively, all at an acceptable level (see Figures 4–6) ($>.40$) (Hair et al. 2010). When the data of ethnic minority groups ($N = 3,410$) were mixed, the factor loading range of items in the LASS for their ethnic languages was from .611 to .888 (see Figure 7).

When it comes to the Han group, the factor loading ranges of the ten items in the LASS for dialect, Putonghua, and English were [.506, .891], [.514, .909], and [.588, .911], respectively, all at an acceptable level ($>.40$) (Hair et al. 2010). As for the Tujia group, the factor loading ranges of the ten items in the LASS for their ethnic language, dialect, Putonghua, and English were [.595, .902], [.576, .918], [.519, .865], and [.316, .908], respectively. It is thus suggested to remove Item 10 (factor loading = .316) when the LASS is used to measure Tujia learners' attitudes towards English. In terms of the Miao group, the factor loading ranges of the items in the LASS for their ethnic language, dialect, Putonghua, and English were ranges of [.611, .888], [.627, .902], [.366, .847], and [.339, .849], respectively. It is thus suggested to remove Item 3 (factor loading = .366) and Item 10 (factor loading = .339) when the LASS is used to assess Miao learners' attitudes toward Putonghua and English, respectively. However, there were only three items in the *Cognition Subscale*, and thus we still kept Item 3 in subsequent analyses to make sure that the Cognition dimension was measured by at least three items (Hair et al. 2010).

Psychometric properties

Item analysis

We first conducted item analysis using SPSS (Wu 2010), specifically, independent t -tests to assess item variance, and item-total correlation analyses to assess the communities of the items. Independent t -tests were conducted between high-score groups and low-score groups at the item level. Those who scored the top 27% and the bottom 27% were created as high-score groups and low-score groups. The results show that all the items have the required discriminant validity ($p < .01$ level), enabling subsequent analyses. Item-total correlations were then checked. The results are displayed in Table 3. According to the criteria ($r = .40$) (Wu 2010), no item was eliminated in this process.

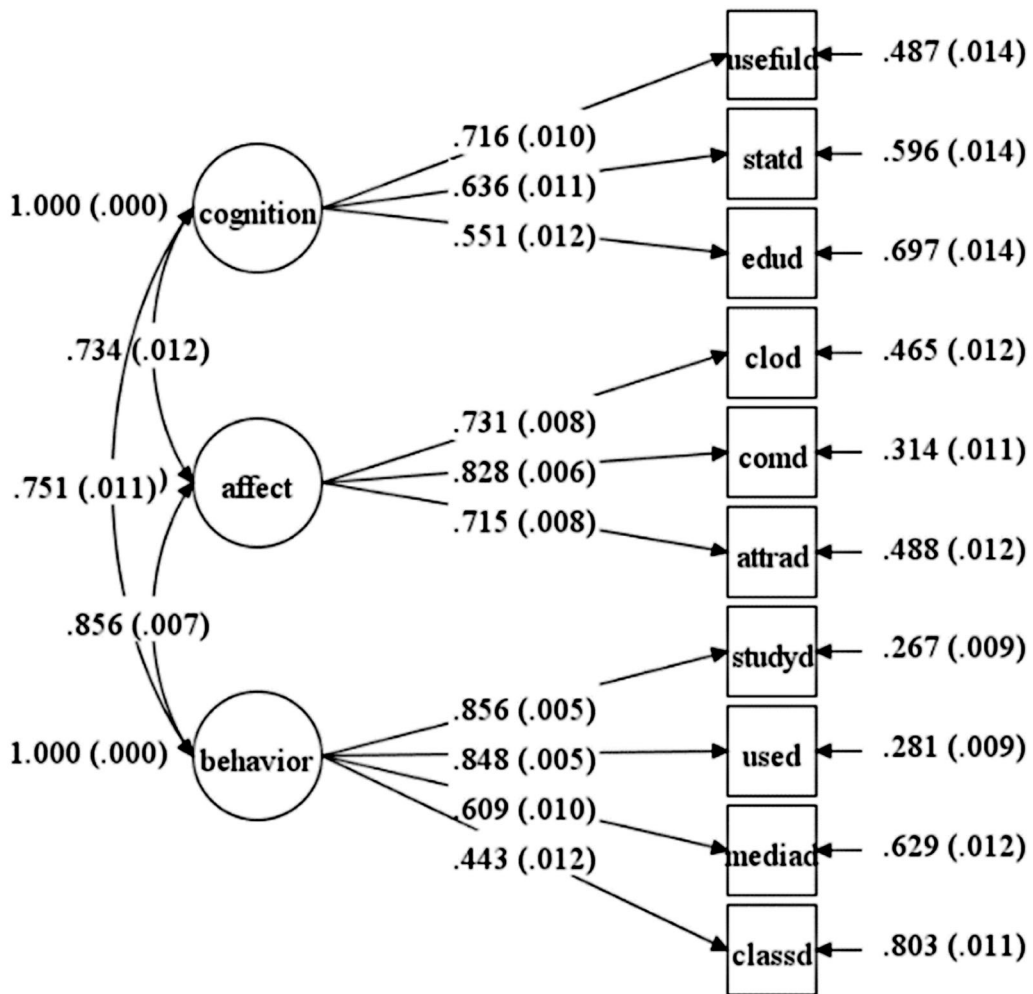


Figure 4. Attitude towards dialect: Factor structure and factor loadings (Whole sample: $N = 5,237$).

Convergent validity

Convergent validity is the evidence of similarity between measures of theoretically related constructs. Composite reliability (CR) and Average Variance Extracted (AVE) are commonly used indicators of convergent validity in a reflective model. CR indicates to what extent the multiple indicators are measuring the construct the factor represents and should exceed .60 in an adequate model (Chin 1998). AVE indicates the average commonality for each latent factor and should exceed .50 in an adequate model (Chin 1998). Based on λ_s , factor loadings of each item obtained in previous CFAs, CRs, and AVEs were calculated automatically with the following two equations using Excel (available on IRIS database when the manuscript is accepted).

The results concerning dialect, Putonghua, and English were based on the whole sample, while the results concerning the minority languages were based on the data of the minority students. As shown in Table 4, CRs and AVEs were generally acceptable for all LASS subscales in relation to different languages, showing desirable convergent validity. However, AVEs for *Cognition Subscale* concerning Dialect and Putonghua were below the cutoff value of .50.

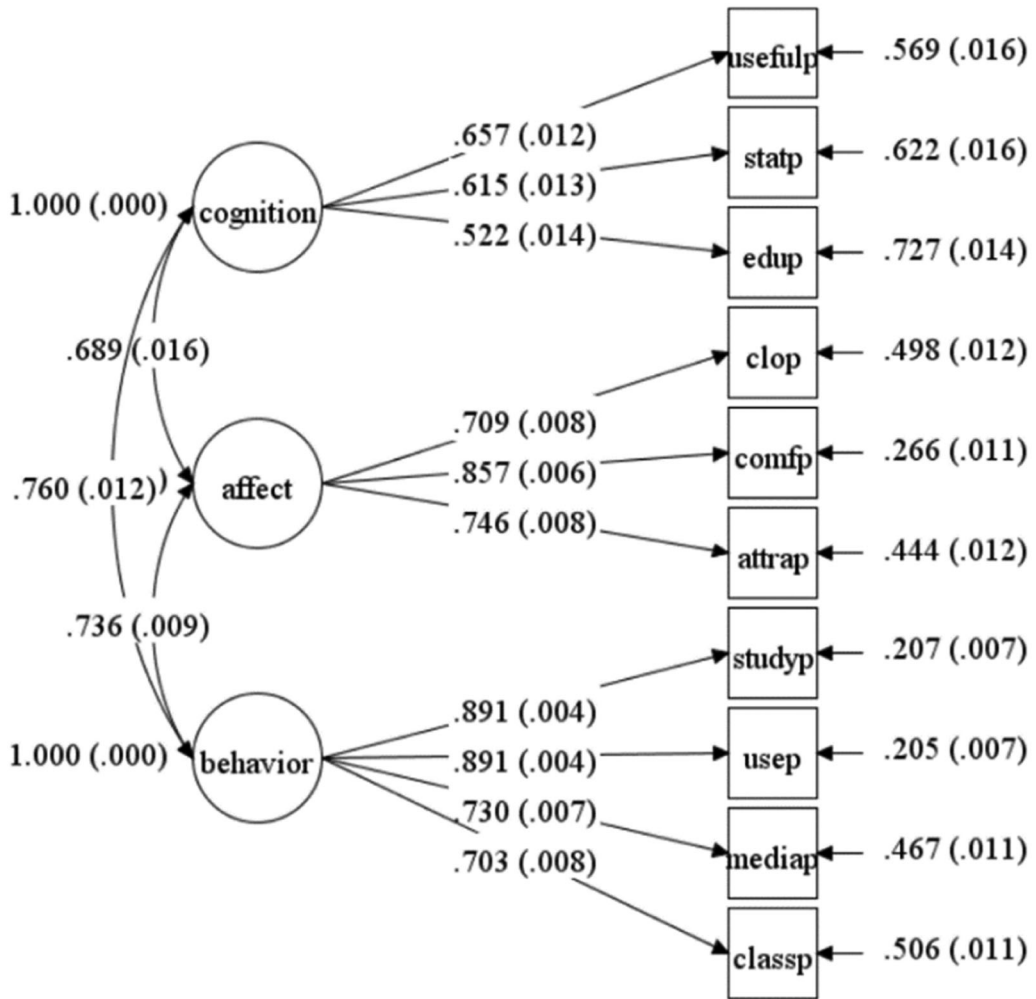


Figure 5. Attitude towards Putonghua: Factor structure and factor loadings (Whole sample: $N = 5,237$).

Criterion validity

Criterion validity refers to the correlation between the measure under validation and non-incidentally but theoretically related constructs (Devellis 2016). The constructs of intended efforts in learning Putonghua and English were used as the criterion constructs considering their conceptual links to language attitudes. The results based on the whole sample showed significant correlations between intended efforts and attitudes towards English ($r = .674, p < .001$), and between intended efforts and attitudes towards Putonghua ($r = .307, p < .001$), indicating adequate criterion-related validity ($N = 5,237$).

Reliability

The reliability of the scale was assessed using Cronbach’s Alpha. The alphas for the global LASS across all languages were above .80 (see Table 5), indicating high overall reliability. At the dimensional level, the alphas for all the three subscales (Cognition, Affect, and Behavior) in relation to different languages were above .65 (Devellis 2016), except the Cognition Subscales in relation to Putonghua. Further refinement could be made to this subscale.

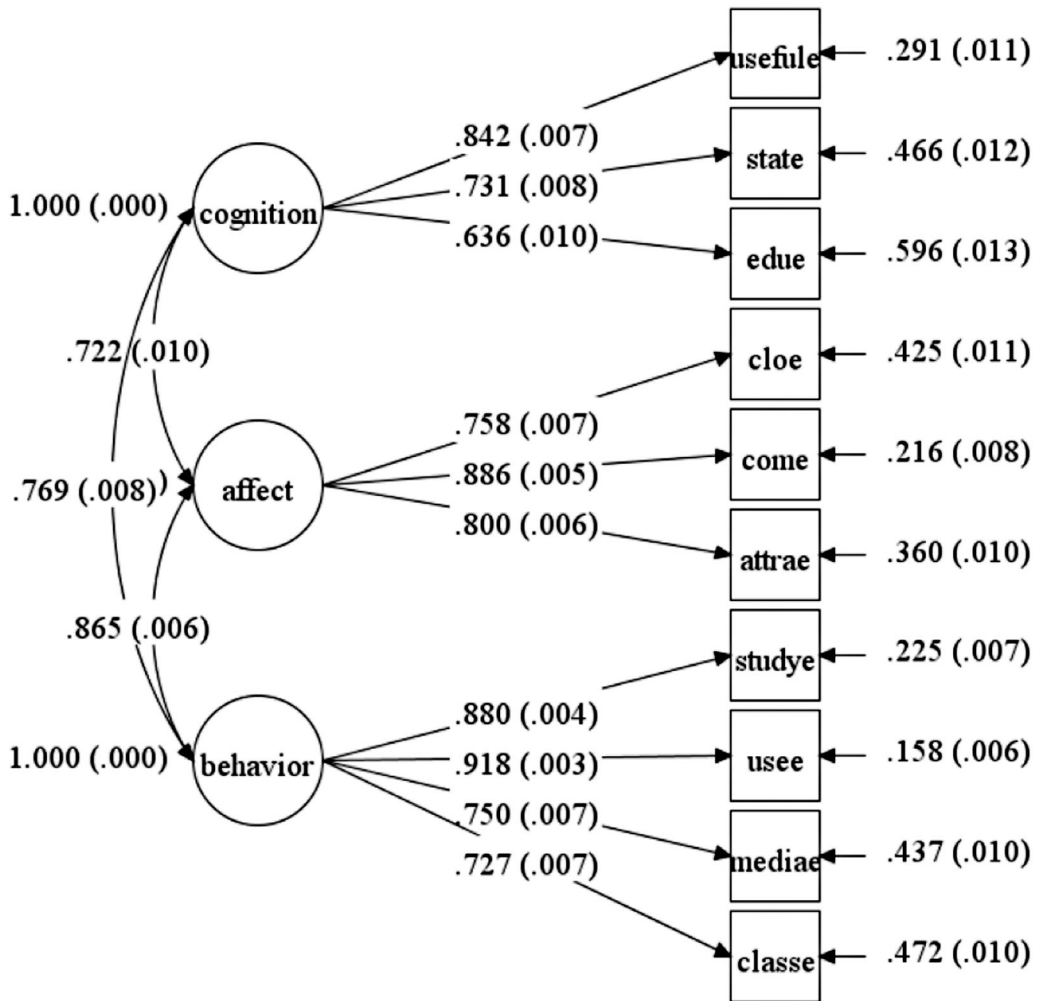


Figure 6. Attitude towards English: Factor structure and factor loadings (Whole sample: $N = 5,237$).

The links between language attitudes and language achievements

The normality of language attitudes scores was confirmed, enabling a series of subsequent Pearson correlation analyses. The results of language attitudes-achievements links are presented in Tables 6 and 7.

Language attitudes and their associations with self-perceived language proficiency

As displayed in Table 6, there was an overall positive correlation between language attitudes and self-perceived language proficiency in the whole sample. The effect sizes ranged from .14 to .62, accounting for 1.96%–38.44% of variance.

Notably, for Han elementary students, no significant correlation was found between their attitudes towards Putonghua and their self-perceived Putonghua proficiency. For Han students in Grade 2 of senior secondary school, no significant correlation was found between their attitude towards dialect and their self-perceived dialect proficiency. For Miao students in their first year and second year of senior secondary education, the correlations between their attitudes towards English and their self-perceived English proficiency were insignificant.

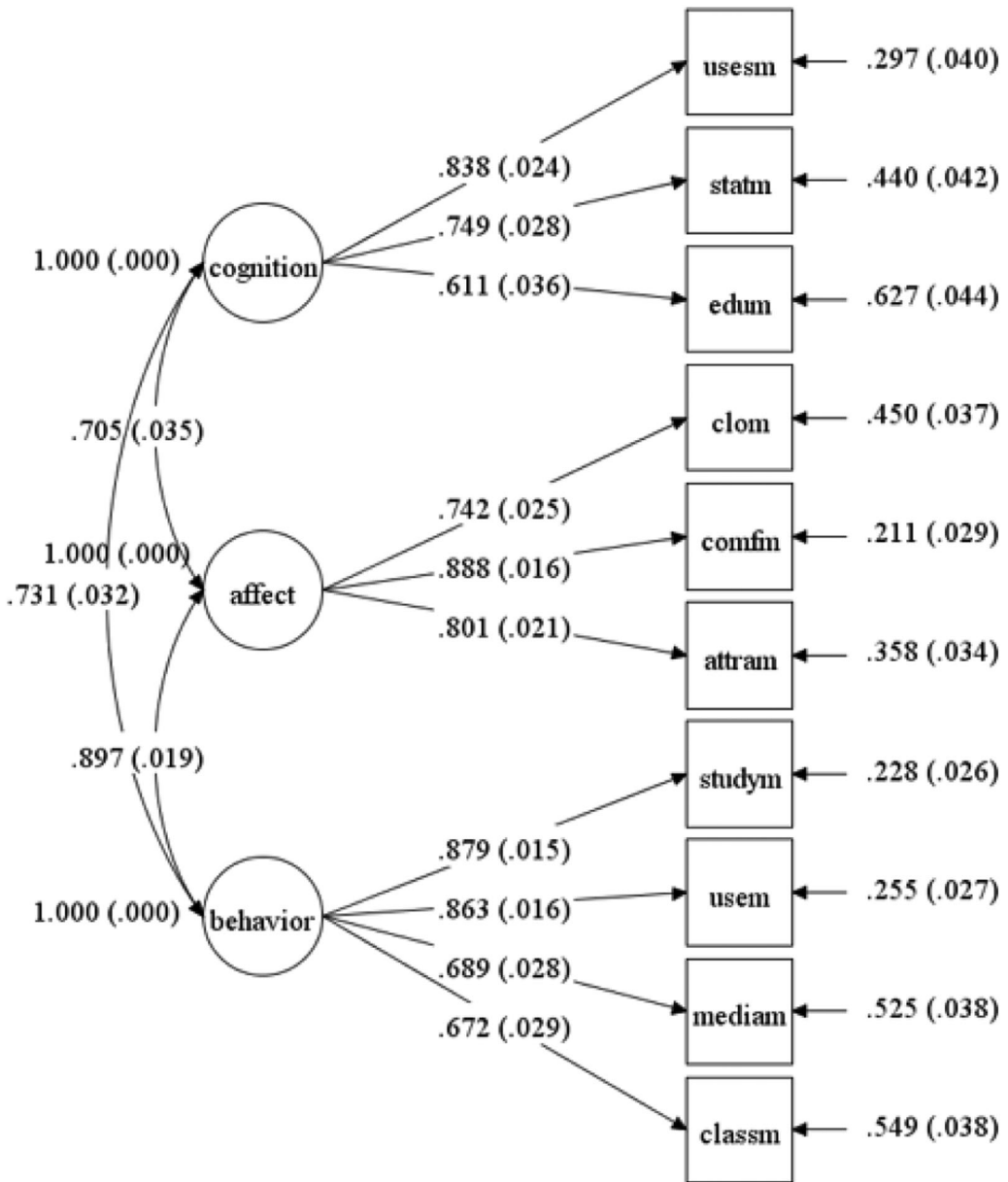


Figure 7. Attitudes towards ethnic languages: Factor structure and factor loadings (Ethnic minority participants: N = 3,410).

Language attitudes and their associations with language exam scores

As displayed in Table 7, regarding English, language attitudes were generally positively linked to English exam scores across educational levels and ethnic groups except for Miao students in Senior 3. The effect sizes ranged from .25 (small-to-medium) to .63 (large), accounting for 6.25% – 39.69% of variance in English exam scores.

For Putonghua, there was a general declining tendency in the correlations between language attitudes and language achievements as the educational level grew. At the elementary level, language attitudes were positively linked to language achievement, and the effect sizes ranged from .25 to .37. At the junior secondary level, language attitudes were generally positively linked

Table 3. Correlation between items and total scales.

Item	Han (<i>n</i> = 1,827)			Tujia (<i>n</i> = 2,242)				Miao (<i>n</i> = 886)			
	Dialect	Putonghua	English	Minority	Dialect	Putonghua	English	Minority	Dialect	Putonghua	English
No.1	.638	.581	.757	.750	.664	.572	.762	.761	.606	.595	.714
No.2	.602	.569	.647	.666	.621	.537	.630	.719	.607	.560	.632
No.3	.623	.609	.569	.675	.576	.612	.622	.655	.554	.579	.608
No.4	.644	.675	.707	.804	.680	.686	.735	.823	.672	.666	.736
No.5	.761	.748	.831	.835	.742	.795	.831	.846	.723	.785	.834
No.6	.723	.791	.783	.779	.732	.759	.821	.802	.712	.737	.802
No.7	.800	.807	.847	.802	.780	.795	.843	.803	.787	.805	.827
No.8	.770	.810	.868	.835	.765	.792	.875	.841	.749	.769	.855
No.9	.709	.729	.793	.811	.694	.740	.781	.809	.642	.633	.735
No.10	.562	.733	.766	.681	.627	.717	.766	.689	.617	.649	.754

Table 4. Convergent validity of the *Language Attitudes Scale-Student Form* in relation to different languages.

Factor	Item	Dialect (Whole sample: <i>N</i> = 5,237)				Putonghua (Whole sample: <i>N</i> = 5,237)				English (Whole sample: <i>N</i> = 5,237)				Minority language (Minority: <i>N</i> = 3,410)			
		λ	COM	CR	AVE	λ	COM	CR	AVE	λ	COM	CR	AVE	λ	COM	CR	AVE
Cognition	1	.716	.513	.671	.407	.657	.432	.627	.361	.842	.709	.783	.549	.838	.702	.780	.546
	2	.636	.404			.615	.378			.731	.534			.749	.561		
	3	.551	.304			.522	.272			.636	.404			.611	.373		
Affect	4	.731	.534	.803	.577	.709	.503	.816	.598	.758	.575	.857	.667	.742	.551	.853	.660
	5	.828	.686			.857	.734			.886	.785			.888	.789		
	6	.715	.511			.746	.557			.8	.640			.801	.642		
Behaviour	7	.856	.733	.793	.505	.891	.794	.882	.654	.88	.774	.893	.677	.879	.773	.861	.611
	8	.848	.719			.891	.794			.918	.843			.863	.745		
	9	.609	.371			.73	.533			.75	.563			.689	.475		
	10	.443	.196			.703	.494			.727	.529			.672	.452		

Table 5. Cronbach's Alphas of Scales and Subscales ($N = 5,237$).

Language (Variety)	Global scale (Subscales)	Whole N =5,237	Cronbach's α			
			Minority n =3,410	Han n =1,827	Tujia n =2,242	Miao n =886
Dialect	Global	.862	.864	.861	.866	.848
	Cognition	.670	.661	.684	.671	.634
	Affect	.796	.803	.793	.805	.773
	Behaviour	.747	.754	.744	.762	.710
Putonghua	Global	.880	.879	.884	.881	.873
	Cognition	.595	.598	.585	.573	.666
	Affect	.813	.819	.799	.822	.811
	Behaviour	.879	.876	.889	.887	.840
English	Global	.921	.922	.919	.923	.914
	Cognition	.781	.782	.774	.791	.760
	Affect	.852	.856	.840	.858	.847
	Behaviour	.888	.886	.891	.889	.866
Ethnic language	Global	.927	.921	/	.919	.925
	Cognition	.765	.747	/	.743	.761
	Affect	.875	.869	/	.865	.876
	Behaviour	.865	.856	/	.859	.858

to language achievements, and the effect sizes ranged from .14 to .33. At the senior secondary level, language attitudes generally lost its correlation with language achievements except for Senior 3 Han students.

Discussion

The current study aimed to (1) clarify the underlying structure of language attitudes, (2) develop and validate an instrument to measure attitudes towards multiple languages within a given society, and (3) examine the predictive effects of language attitudes on language achievements.

Regarding the underlying structure of language attitudes, CFA results in Table 2 and Figures 4–7 show that attitudes of different ethnic groups towards different languages were generally conceptualised and expressed through their cognitive, affective, and behavioural components. The results provide statistical support for the widely accepted triadic model of language attitudes, rooted in social psychology (Allport 1935; Eagly and Chaiken 1993) and sociolinguistics (Dragojevic 2016; Garrett 2010). Language attitudes are *cognitive* in that they involve beliefs and judgments of languages. For example, many language learners in the current study believe that Putonghua is of social significance, and English is associated with a high educational level. The *affective* component of language attitudes concerns the feelings about the languages and is related to the favorability and unfavorability of certain language aspects or the extent to which language learners approve or disapprove of certain language aspects. For example, some language learners feel most comfortable using their dialects, and some reported likings of their ethnic language. Language attitudes are *behavioral* insofar as they concern the predisposition to behave in a certain way, and perhaps in a way typically in line with cognitive and affective judgments. For example, some participants reported that they were willing to study or use a certain language in their life events. Exceptions were the occasions when the LASS was used concerning English as a foreign language among the two ethnic minority groups. The three-factor model was inadequately supported as indicated by the large RMSEAs (.12 and .16 respectively) presented in Table 2, indicating the need for further modifications in similar contexts.

Moving to the second RQ about measurement, the current study also provides a practical instrument for measuring the attitudes of students at different educational levels towards their dialects, official language (Putonghua), ethnic language (Tujia language, Miao language, etc.), and English as a foreign language. A series of reliability and validity tests of the overall scales, their subscales, and the individual items in relation to four different languages (varieties) have shown that the

Table 6. Correlations between language attitudes and self-perceived language proficiency (r).

Edu	Grade	N	Whole				Tujia				
			Dialect	Putonghua	English	Minority	N	Dialect	Putonghua	English	Minority
Ele	6	665	.37***	.34***	.44***	.34***	292	.43***	.45***	.46***	.37***
Junior	1	900	.42***	.34***	.62***	.46***	384	.48***	.37***	.54***	.50***
	2	921	.37***	.29***	.55***	.39***	454	.39***	.32***	.53***	.46***
	3	613	.35***	.33***	.49***	.28***	312	.35***	.42***	.47***	.21***
Senior	1	417	.34***	.14**	.63***	.37***	213	.44***	.14***	.68***	.34***
	2	425	.38***	.19***	.39***	.44***	206	.42***	.15***	.37***	.36***
	3	425	.25***	.27***	.43***	.48***	208	.28***	.28***	.49***	.47***
Ter	1	566	.26***	.34***	.44***	.37***	82	.41***	.56***	.45***	.49***
	2	305	.37***	.46***	.45***	.51***	45	.60***	.55***	.50***	.55***
Edu	Grade	Han	Dialect	Putonghua	English	Minority	Miao	Dialect	Putonghua	English	Minority
Ele	6	167	.30***	<i>ns</i>	.33***	/	142	.35***	.33***	.24***	.33***
Junior	1	263	.37***	.31***	.55***	/	174	.56***	.21***	<i>ns</i>	.57***
	2	292	.37***	.30***	.58***	/	159	.31***	.46***	.30***	.56***
	3	157	.40***	.43***	.59***	/	141	.46***	.20***	.25***	.47***
Senior	1	107	.27***	.31***	.52***	/	85	.27***	<i>ns</i>	<i>ns</i>	.62***
	2	106	<i>ns</i>	.29***	.56***	/	80	.38***	.36***	<i>ns</i>	.35***
	3	98	.39***	.46***	.45***	/	74	.36***	<i>ns</i>	.33***	.27***
Ter	1	420	.25***	.38***	.52***	/	13	/	/	/	/
	2	217	.23***	.33***	.29***	/	13	/	/	/	/

Note: *** $p < .001$, *ns* = not significant. Edu = Educational level; Ele = elementary; Ter = tertiary

Table 7. Correlations between language attitudes and real achievement in languages (*r*).

Edu	Grade	Whole			Han			Tujia			Miao		
		<i>N</i>	Putonghua	English	<i>N</i>	Putonghua	English	<i>N</i>	Putonghua	English	<i>N</i>	Putonghua	English
Ele	6	612	.33***	.34***	144	.25***	.37***	292	.37***	.48***	142	.37***	.32***
Junior	1	765	.19***	.42***	246	.33***	.41***	384	.26***	.45***	127	<i>ns</i>	.38***
	2	921	.30***	.41***	266	.24***	.36***	437	.40***	.63***	149	.25***	.35***
	3	492	.14***	.27***	134	<i>ns</i>	.46***	301	.15***	.44***	82	<i>ns</i>	.40***
Senior	1	417	<i>ns</i>	.28***	97	<i>ns</i>	.23***	195	<i>ns</i>	.42***	81	<i>ns</i>	.45***
	2	405	<i>ns</i>	.26***	100	<i>ns</i>	.31***	200	<i>ns</i>	.50***	79	<i>ns</i>	.35***
	3	414	.11*	.25***	97	.27***	.27***	203	<i>ns</i>	.38***	72	<i>ns</i>	<i>ns</i>

Note: *ns* = not significant; Edu = Educational level; Ele = elementary; Ter = tertiary

LASS is generally psychometrically sound. As shown in Figures 4–7, the factor loadings of items in the scales were also satisfactory.

The LASS has apparent research value in that the same scale can be applied to bilinguals or multilinguals within a given society to measure their attitudes towards multiple languages they have acquired, enabling the comparison between attitudes towards different languages of the same group. In addition, the LASS is parsimonious with just ten items measuring the attitude towards a specific language. The parsimony allows for high feasibility, convenient administration, and easy interpretation. Pedagogically, language educators may use it as a diagnostic tool of language learners' language attitudes (changes), which is crucial in intervention practice and research. Intervention programmes could be devised based on the tripartite model of language attitudes. The effectiveness of the programme could be attested using a pre-and post- research design with the LASS as a diagnostic tool.

As for the last RQ about language attitudes-achievements links, the results show that language attitudes generally predicted self-perceived proficiency of four different languages across three different ethnic groups and nine specific educational levels from the elementary to the tertiary level. Participants who had more positive language attitudes tended to perceive themselves as being more competent in the target languages. This indicates that language attitude was closely linked to learners'/users' confidence and self-efficacy in target languages, both of which are important individual difference constructs in language learning psychology research (Gardner, Tremblay, and Masgoret 1997). In line with assumptions in prior research (Artamonova 2020; Gardner 1988b; Gardner and Lambert 1972), the empirical results also show that language attitudes predicted real English achievement across languages, ethnicity, and educational levels. Participants who had more positive attitudes towards English were more likely to score higher in the English exam. This points to the need to include language attitude as an important individual difference factor for foreign language achievement in its own rights (Gardner, Tremblay, and Masgoret 1997). Concerning the standard language of Putonghua, the predictive effect of language attitude on Chinese exam scores was only significant for students at the elementary and junior secondary educational levels. The reasons may be multifaceted. For example, this indicates that age may play a mediating role between language attitudes and language achievement in Putonghua-as-a-standard-language context.

Limitations and suggestions for future directions

The following limitations should be acknowledged. Firstly, only elementary students were selected as participants in the preliminary data collection stage. It should be more rigorous if participants from other groups had been included in the stage although the scales were subsequently cross-validated among large samples at different educational levels in the main study. Secondly, the participants in the study were students in a single autonomous prefecture in China and the LASS developed and validated based on this sample may not apply to other student populations. Similarly, the structure underlying language attitudes may also vary from context to context. Future studies should further cross-validate the LASS in diverse populations, especially those with different linguistic and cultural backgrounds. Thirdly, we have to point out that the current LASS is far from being one-size-fits-all. Instead, it shows its readiness for being modified to fit into any target linguistic context. For example, the item: '*Do you think [a specific language] is useful?*' can be used to assess beliefs about the usefulness of any specific language. Lastly, although we examined the attitudes of the same student group towards four different languages (varieties), we did not present the attitudinal differences among languages in the current study considering the word limit. It would be a potential arena to compare attitudes towards different languages of the same group within a given society using the same measurement, as attitudinal differences may be closely related to differences in other important language-related aspects, such as identity (Allport 1954; Garrett 2010), language engagement and motivation, and language achievement (Artamonova 2020; Gardner 1988a; Gardner, Tremblay, and Masgoret 1997; Gardner and Lambert 1972).

Conclusion

The current study corroborates the tripartite model of language attitudes based on a large sample of multilinguals in Enshi Tujia and Miao Autonomous Prefecture in Hubei Province, China. Attitudes towards ethnic language, dialect, Putonghua, and English were consistently found to have cognitive, affective, and behavioural components. The current study also provided a parsimonious yet psychometrically sound *Language Attitudes Scale-Student Form* to measure attitudes towards four languages (varieties) of the same group of multilinguals, allowing for future contrastive research using a unified measurement. The results also successfully differentiated language attitudes from motivation, two constructs commonly interchangeably misused in L2 research. The results also suggest that language educators need to help their students develop positive language attitudes because they are not only closely linked to motivation and self-confidence in language learning, but also play a significant role in predicting language achievement. These coalesce to reignite interest in future investigations of language attitudes as crucial individual difference factors in their own rights in the field of L1 and L2 learning.

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Appendices

Appendix 1. The use of Tujia minority language in public sign, textbook, and game song lyrics



Appendix 2. Demographic characteristics of participants

	Level	Grade	School	Male	Female	Others	Mean Age	SD	M	SD	Tot.
Han (n = 1,827)	Elementary	6	BFS	30	27	1	11.58	.74	15.62	2.79	58
			MZ	62	47	0	11.31	.48			109
	Junior	1	DH	57	50	2	12.79	.52			109
			SY	29	20	0	12.41	.53			49
			GP	54	51	0	12.61	.72			105
			DH	86	57	1	13.79	.54			144
	Senior	2	SY	17	22	2	13.34	.52			41
			GP	53	54	0	13.56	.64			107
			SY	24	21	1	14.50	.65			46
			GP	50	61	0	14.53	.63			111
			GJ	47	58	2	15.73	.68			107
			DH	45	61	0	17.39	.73			106
	University	3	SY	52	45	1	16.48	.92			98
			GP	50	61	0	14.53	.63			111
Tujia (n = 2,242)	Elementary	6	MZU	211	195	14	18.34	.83	14.27	2.25	420
			DH	70	138	9	19.36	.86			217
	Junior	1	BFS	85	79	3	11.56	.60			167
			MZ	82	71	4	11.37	.62			157
			DH	67	68	0	13.00	0			135
			SY	47	51	3	12.26	.46			101
	Senior	2	GP	80	82	0	12.56	.68			162
			DH	81	64	1	13.86	.61			146
			SY	61	55	0	13.48	.96			116
			GP	102	90	2	13.89	1.01			194
			SY	54	53	0	13.07	.83			107
			GP	114	91	0	13.58	.89			205
	University	3	GJ	83	128	2	15.60	.66			213
			DH	84	121	1	17.37	.73			206
GP			93	111	2	16.77	.77	206			
Miao (n = 886)	Elementary	6	MZU	39	38	5	17.40	.58	14.47	2.53	82
			DH	9	35	1	18.31	.60			45
Others (n = 282)	Elementary	6	BFS	20	12	1	11.70	.73	14.69	2.47	33
			MZ	51	63	0	11.47	.50			114
	Junior	1	DH	20	17	0	12.97	.16			37
			SY	20	23	0	12.98	.15			43
			GP	54	39	1	13.01	.37			94
			DH	20	11	0	12.26	.44			31
	Senior	2	SY	22	28	1	13.76	.95			51
			GP	39	37	1	13.48	.58			77
			SY	21	33	5	14.38	.63			59
			GP	33	49	0	13.30	.99			82
			GJ	38	47	0	15.51	.77			85
			DH	38	42	0	17.36	.62			80
	University	3	GP	41	33	0	16.46	.62			74
			MZU	9	4	0	18.92	.64			13
Total	Elementary	6	BFS	2	6	0	11.50	.53	14.69	2.47	8
			MZ	8	10	1	11.94	1.00			19
	Junior	1	DH	3	5	0	13.00	0			8
			SY	2	3	0	13.20	.84			5
			GP	7	5	0	13.25	1.06			12
			DH	2	3	1	14.00	1.10			6
	Senior	2	SY	15	8	0	13.17	.65			23
			GP	5	5	1	13.18	1.08			11
			SY	1	2	3	14.42	.78			6
			GP	8	5	1	14.15	.80			14
			GJ	6	7	1	16.21	.70			14
			DH	17	16	2	16.76	1.05			35
	University	3	SY	15	20	5	16.69	1.07			40
			MZU	21	29	1	19.23	1.18			51
Total	2	DH	4	25	1	19.60	.81	30			
				2,513	2,641	83			5,237		

Appendix 3. The Language attitudes scale-student form (LASS)

Subscales	《语言态度量表》中文版	<i>The Language Attitudes Scale-Student Form (LASS)</i>	Source
Cognitive	你觉得本民族语言/方言/普通话/英语有用吗?	Do you think [your ethnic language/dialect/Putonghua/English] is useful?	(Qu 2017)
	你觉得本民族语言/方言/普通话/英语受社会重视吗?	Do you think [your ethnic language/dialect/Putonghua/English] is highly regarded in [Chinese] society?	(Ng and Zhao 2015)
	你觉得会说本民族语言/方言/普通话/英语会显得有文化吗?	Do you think a person who speaks [your ethnic language/dialect/Putonghua/English] fluently is usually well-educated?	Authors
Affective	你觉得本民族语言/方言/普通话/英语听上去亲切吗?	Do you feel emotionally attached to [your ethnic language/dialect/Putonghua/English]?	(Ng and Zhao 2015)
	你觉得本民族语言/方言/普通话/英语听上去舒服吗?	Do you feel comfortable when hearing [your ethnic language/dialect/Putonghua/English]?	(Ng and Zhao 2015)
	在与人相处的时候, 你觉得本民族语言/方言/普通话/英语具有吸引力吗?	Do you think [your ethnic language/dialect/Putonghua/English] is socially attractive?	(Artamonova 2020)
Behavioural	你是否愿意学习本民族语言/方言/普通话/英语?	Are you willing to learn [your ethnic language/dialect/Putonghua/English]?	Authors
	你是否愿意使用本民族语言/方言/普通话/英语?	Are you willing to use [your ethnic language/dialect/Putonghua/English]?	Authors
	你是否愿意收听、收看本民族语言/方言/普通话/英语的电视、广播节目?	Are you willing to listen to radio or watch TV programmes in [your ethnic language/dialect/Putonghua/English]?	Authors
	课堂上你希望用本民族语言/方言/普通话/英语吗?	Would you prefer to use [your ethnic language/dialect/Putonghua/English] in class?	(Ng and Zhao 2015)

注:

1) '方言'是指区别于标准普通话的当地语言, 如恩施话、来凤话等, 请根据自身地理位置和语言背景情况回答。

2) '少数民族语言'是指人口占少数的非汉族民族使用的语言, 如苗语(苗族语言)、土家语(土家族语言), 请根据自身民族背景和语言背景情况回答。

Note:

1) 'Dialect' refers to a particular form of a language that is spoken in a specific region, e.g. Enshi dialect, Laifeng dialect. Please answer the questions based on your geographic and linguistic background.

2) 'Ethnic minority language' refers to a language spoken by a minority of the population of a territory (non-Han population in the current context), e.g. Miao Language, Tujia Language. Please answer the questions based on your ethnic and linguistic background.