



The Road to Quality Chinese Language Programmes: When Students' Cultural Learning Styles Match With Teachers' Teaching Styles

Lynne N. Li

(lynne.li@rmit.edu.au)

RMIT University, Australia

Bao-Qiang Gao

(b.gao@latrobe.edu.au)

La Trobe University, Australia

Jindan Ni

(jindan.ni@rmit.edu.au)

RMIT University, Australia

Abstract

Learning styles have been researched extensively over past decades, particularly in the 1970s and 1980s. After years of proliferation in theories and models, the last two decades have largely seen researchers at a crossroads in identifying new directions for researching learning styles, which has led to much interest in the interaction between cultures and learning styles. This article presents one such research study exploring culturally unique ways of learning and teaching languages in an Australian university. Within the theoretical frameworks of learning styles, and of language and culture, this article examines the cultural learning styles of students learning Chinese as a second/foreign language through the lenses of Individualist versus Collectivist cultures, as categorised by Hofstede. Teachers' teaching styles are showcased, as well as their readiness and abilities to respond to the need for a collaborative approach towards creative and innovative curriculum design and teaching practices. It is anticipated that this study will shed light on quality Chinese language education in Australia and the future direction of research on (cultural) learning styles for globalised learners of languages.

1 Introduction

Since learning styles have been considered an influencing factor in educational outcomes of students, including those studying languages, teachers and researchers have embarked on a journey to investigate the nature and composition of learning styles. The past 100 years have witnessed intense interest in research into learning styles, and the research output has been extensive and prolific, including behavioural, cognitive, physiological, biological, affective and even neurological dimensions (e.g., Goodenough, 1976; Keefe, 1979, 1987; Kogan, 1971; Kolb, 1976; Reinert, 1976; Witkin, 1976). However, only in the past two decades have researchers started to focus on the cultural dimension of learning styles and teaching styles (e.g., Cothran et al., 2013; Fan & Ye, 2007; Li, 2015; Rayner & Cools, 2011; Reid, 1995; Willing, 1993; Zhang & Sternberg, 2001).

The diversity and quantity of research activities and outputs on learning styles may simply mean that each student learns differently in their unique ways. For this reason, teachers must make hard decisions when faced with the large spectrum of individual differences each student brings to the learning environment. A large part of these differences in the context of cross-cultural learning is believed to be related to the Individualist style of learning and the Collectivist style of learning, which represent the dominant value systems in Western cultures and Eastern cultures, respectively (Hofstede, 1980, 1986, 2001; Li & Gao, 2018; Peters, 2015). A culturally collaborative approach between teachers and students towards learning styles and teaching styles may involve identifying the differences or uniqueness in second/foreign language learning.¹

This current study explores cultural learning styles by drawing on Hofstede's cultural dimensions in language-learning environments. It aims to examine the interaction of the cultural learning styles of Chinese language-learning students and the teaching styles of their teachers in an Australian university. Through theoretical and pragmatic evidence collected for this study, this paper presents a culturally collaborative approach that can lead to creative and innovative thinking towards quality university Chinese programmes. It is a response to the call for new directions in future research on the "enduring appeal of learning styles" (Scott, 2010), as well as to the demands of internationalisation of education, of which the "intercultural dimension" of curriculum and language learning is an essential element (Crichton & Scarino, 2007, p. 4).

2 Literature review

2.1 Cultural learning styles

Research into the sociocultural dimension of learning styles started almost as early as research into other dimensions of learning styles in the early twentieth century. However, heated debates about the cultural dimension of learning styles only took place from around the 1980s and 1990s, when internationalisation of education started to take hold and researchers began to seek solutions to problematic cross-cultural learning situations (Hofstede, 1986). The intervention of culture also infiltrated into discussions about learning styles in relation to language learning (e.g., Dunn, Gemake, Jalali & Zenhausen, 1990; Dunn & Griggs, 1988; Nelson, 1995; Oxford, Ehrman, & Lavine, 1991) as language learning and culture learning are two intertwined entities. In Brown's (1980) terms, "second language learning is often second culture learning" (p. 129).

The research on cultural differences in learning of societies or countries is probably best represented by Hofstede (1986), who claimed that differences in learning are closely related to differences in cognitive ability. According to Hofstede, the development of cognitive abilities is believed to directly result from cultural needs and values. He made direct reference to the impact of culture on learners' cognitive development, asserting that "our cognitive development is determined by the demands of the environment in which we grew up" (Hofstede, 1986, p. 305). Hofstede's deterministic view on the culture – cognitive learning connection forms the essential theoretical underpinning for the research outlined in this paper.

On the basis of his study on work-related values in over 50 countries, Hofstede developed his four-dimensional model of cultural differences among societies. This model refers to the following four dimensions: Individualism versus Collectivism, Large versus Small Power Distance, Strong versus Weak Uncertainty Avoidance, and Masculinity versus Femininity (Hofstede, 1980, 1986, 1991).

Hofstede (1986) believed that the teacher–student relationship is "an archetypal role pair in virtually any society" (p. 301). He applied the four dimensions of national differences to the cross-cultural learning context with regard to the relationship of teacher and student in the classroom, with Collectivism, Large Power Distance, High Uncertainty Avoidance and Feminism associated with the Eastern (or Collectivist) style of learning, and their opposites referred to as the Western (or

Individualist) style of learning. In language-learning classroom situations, Collectivist versus Individualist styles of learning can be interpreted as traditional versus non-traditional, teacher-centred versus student-centred, formal versus informal, and collaborative progress versus competition focused (Hofstede, 1986). These differences in learning and teaching styles often manifest in the emphasis on developing literacy skills versus communicative competence of languages.

Research studies applying Hofstede's cultural dimensions in learning contexts are abundant, but those linking them to learning styles are limited. Zhang and Sternberg (2012), however, presented a rare, but significant, analysis of the relevance of Hofstede's (1980) four cultural dimensions model to six selected learning style models—Witkin's Field-Dependence/Independence (Witkin, 1962), Reflectivity–Impulsivity (Kagan, 1965), Personality Types (Jung, 1923), Career Interest Types (Holland, 1973), Learning Processes (Biggs, 1978) and Thinking Styles (Sternberg, 1988, 1997). Zhang and Sternberg's (2012) analysis supports their hypothesis that the selected learning style models are related to Hofstede's cultural dimensions model, although variation exists among the models.

Among the limited number of studies of cultural learning styles in the arena of language learning, Li (2015) employed an assessment inventory that is adapted from Hofstede's (1986) teacher–student interaction theories relating to two of his cultural dimensions—Individualism versus Collectivism and Large versus Small Power Distance. TESOL (Teaching English to Speakers of Other Languages) student-teachers undergoing training in an Australian university were invited to participate in the research. The result of the study affirms the key role that cultural differences play in the learning of English as a Second Language (ESL) for student-teachers and echoes the claim of other researchers that the concept of cultural learning style is an essential trait for teachers to accommodate in cross-cultural learning contexts (e.g., Nelson, 1995; Oxford et al., 1991).

2.2 Teaching Styles as a Reflection of Learning Styles

In cross-cultural learning contexts, success in language learning and teaching relies, to a large extent, on the success of acknowledging and identifying the uniqueness of students' cultural learning styles as well as teachers' teaching styles. Embracing and matching students' cultural learning styles with teachers' teaching styles is not only a necessary process but also a possible source of positive learning outcomes. Failure to understand the concepts of (cultural) learning styles and teaching styles and their uniqueness may cause difficulty and frustration for both students and teachers.

Conti (1989) defined teaching styles as the “overall traits and qualities that a teacher displays in the classroom that are consistent for various situations” (p. 3). Similarly, learning styles are defined as “cognitive, affective, and physiological traits that are relatively stable indicators of how learners perceive, interact with, and respond to the learning environment” (Keefe, 1979, p. 4). Both definitions—one for teaching styles and the other for learning styles—assume that both notions are about “traits” and share the qualities of being stable and consistent over time. The close connection of learning styles and teaching styles has enticed researchers to investigate matching and integrating the two styles. It has been reported that if learning styles and teaching styles can be matched and work hand-in-hand in learning situations, learning can be turned into a rewarding experience for both students and teachers (e.g., Cheng & Banya, 1998; Dunn & Dunn, 1972; Guild, 2001).

Researchers have also suggested that the gap between learning styles and teaching styles can be bridged if teachers make conscious and concerted efforts to improve teacher–student style conflicts (Cheng & Banya, 1998; Dunn & Dunn, 1972; Guild, 2001). Teachers can use their preferred teaching styles, can switch from one teaching style to another, or can help their students to develop new learning styles so they can switch from one learning style to another depending on different learning situations that they may encounter (Dunn & Dunn, 1972; Pithers & Mason, 1992). To these researchers, the process of matching learning styles is essentially a collaborative process between students and teachers in making adjusted, compromised and balanced decisions for the learning tasks while being supported by their own unique understanding of what learning is about.

To realise the potential benefits of cultural learning styles, teachers have to be sensitive to differences between the students' learning styles and their own teaching styles to identify typical behaviour and preferences, and to group students according to widely accepted sociocultural assumptions and concepts where necessary (Grasha, 1996; Oxford, 1990a, 1990b; Willing, 1998). Research studies on sociocultural assumptions in learning and teaching styles refer to learning within the Confucian cultural context as "Confucian-oriented learning or Chinese-influenced approaches to learning" (Tweed & Lehman, 2002, p. 93) or, in Hofstede's terms, as Collectivist ways of learning. In addition, Rao (2003) performed a sound analysis of the rationale behind bridging the gaps between learning styles and teaching styles in East Asian learning contexts.

While matching teachers' teaching styles with students' learning styles may seem a daunting task, the fact is that teachers' teaching styles are closely related to their own learning styles. Language teachers can identify their own teaching styles by evaluating their own learning styles as teachers tend to teach in the way that they learned best while at school (Kinsella, 1995; Oxford, Hollaway, & Horton-Murillo, 1992). As reflected by Marshall (1991) after surveying teachers' teaching styles, "In the consistency of this response, I began to understand why teachers collectively could assume that how they taught was correct for all students. After all, it was the way they were taught" (pp. 225–226). Teachers teach in the manner in which they used to learn and be taught, which indicates that teachers' teaching styles are deeply intertwined with what they have experienced and what they believe regarding how to learn and how to teach.

After discussing how teachers often default to teaching in the traditional way or with the teaching styles they are used to, or by which they used to learn, Marshall (1991) delivered a powerful message to all teachers to call for an innovative approach towards learning styles and teaching styles:

"Consequently, for teachers to change their teaching styles, to understand and risk planning instruction on the basis of learning style patterns of students, and, therefore, to teach successfully a wider range of learners, they must come to recognize, respect, and support the learning differences of students. If students do not learn the way we teach them, then we must teach them the way they learn. As a profession, we must be ready and willing to change our philosophy, to adjust our focus, to place high priority on successful learning for all students, recognizing that those most at-risk must have the best-trained, most committed teachers. This shift will be accomplished by educators fired with passion and compassion, within the rethought and restructured classroom." (p. 226)

To match learning styles with teaching styles is, in principle, about a collaborative approach between students and teachers towards making adjustments in learning focus, being flexible in learning and teaching styles, and being prepared to transform education philosophy and traditional beliefs in how learning should be undertaken. Hofstede took one step further in dealing with cross-cultural learning situations. As both teacher and student may speak different native languages and as teachers have more power over classroom learning than the student, Hofstede (1986) suggested that the teachers' acquisition of their students' culture will enhance successful learning and cultural adaptation for their students. This observation can be translated into cross-cultural language-learning contexts, where teachers can adopt or adapt to the cultural learning styles of their students.

In the Australian language-learning context, the usual situation is that a large number of students start learning languages from beginner or post-beginner level. Thereafter, they discontinue, creating a pyramid structure, with a very small number of students progressing to higher levels. The progression rate of language-learning students has long been identified as a major area of challenges (Nettelbeck et al., 2009). Researchers on learning styles have also found that students at the more advanced levels of learning tend to experience higher levels of frustration if their learning needs, expectations or styles are not met or satisfied (Cornett, 1983; Ramburuth, 1998; Rao, 2003). To build a full suite of language courses, starting from beginner levels (e.g., Chinese 1) and evolving into advanced levels of language proficiency (e.g., Chinese 10), it is critical for educators to work vigorously to accommodate the students' uniqueness in their (cultural) learning styles. Aiming for a

full suite of Chinese courses through catering for learners' individual differences, including (cultural) learning styles, constitutes one of the major challenges in the development of quality university language programmes. This current study aims to address this challenge within the theoretical frameworks of cultural learning styles and Chinese language learning and teaching in cross-cultural learning contexts.

3 Research design

This is a quantitative study. Forty-eight Chinese-learning students from different parts of the world participated in the research. They were enrolled in Chinese courses, either as a university elective or as part of a Diploma of Languages, at an Australian university. Their Chinese language teachers, with a total of seven, also participated in the study.

3.1 Research instrument

The research instrument for this study is the Cultural Learning Styles Inventory (CLSI), which is drawn from the cross-cultural interaction patterns between students and teachers identified through Hofstede's (1980, 1986) cultural dimensions. The CLSI assesses the differences between cultural systems in classroom situations, tapping into two of Hofstede's four cultural dimensions: Individualism versus Collectivism, and Large versus Small Power Distance. These two dimensions are chosen as they are considered more closely associated with cross-cultural language-learning situations than the other two dimensions, Uncertainty Avoidance and Masculinity versus Femininity.

The CLSI contains 23 paired statements as two polar extreme opinions, and participants are required to choose the statement (either A or B of the paired statements) that best expresses their values in understanding the ways or styles of their cross-cultural learning (Hofstede, 1986). For instance, one of the paired items is:

- A) Individuals will speak up in large groups.
- B) Individuals will only speak up in small groups.

Those who apply the Individualist style of learning will choose A as they believe students can speak their opinions in front of a large group, which is more characteristic of the Individualist or Western style of learning. Those who lean towards the Collectivist style of learning will choose B as they believe they feel more comfortable speaking up in small groups, which is a feature of the Collectivist or Eastern style of learning. The 23 'either-or' paired statements locate the participants on the continuum of two contrasting cultural value systems about how they view their own ways of learning. Teachers' teaching styles are examined through their learning styles as teachers tend to teach in the way that they learned best (Oxford et al., 1992).

The score on the Collectivism/Individualism dimension is obtained by subtracting the Individualism score from the Collectivism score, while the score for the Power Distance dimension is obtained by subtracting the Large Power Distance score from the Small Power Distance score. An increase in one aspect means a decrease in the other.

The quantitative data collected from the CLSI were coded into a numeric system, and then analysed using SPSS software. They were also translated into a grid (see Figure 1).

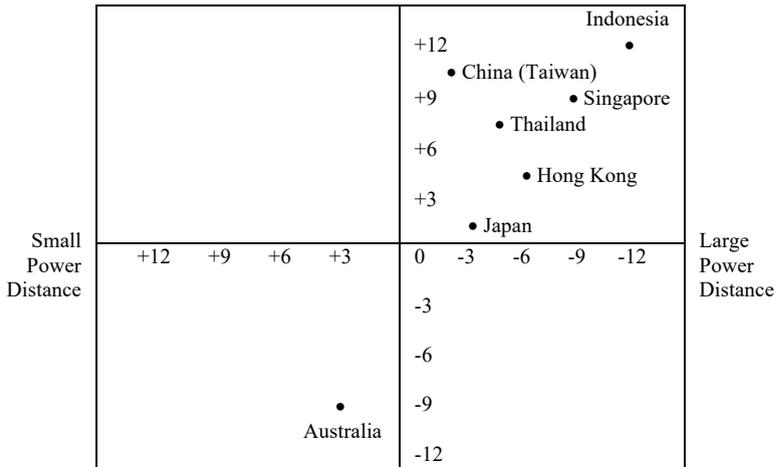


Fig. 1. The Norms of Cultural Learning Styles on the Grid (Adapted from Hofstede, 1986)

The norms for Australia and a few selected Asian countries, in accordance with Hofstede's (1980) categories, are included in Figure 1 to make comparisons with the data obtained for the research participants of the current study. As the grid shows, the cultural norms of Asian countries, including Indonesia, Singapore, Thailand, Hong Kong and Japan, all fall into the upper right quadrant of the grid. China was not originally on the grid as China did not participate in Hofstede's (1980) study. Taiwan and China share the Confucius tradition and Confucian-oriented learning²; therefore, China's norm is represented in the grid by Taiwan, shown in brackets. Students from these Asian countries are characterised as representing the Eastern learning style—traditional, teacher-centred, formal and seeking collective progress during study. Australia, by contrast, sits at the very bottom and left of the grid (-9, +3). Therefore, Australian students display the features of the Western learning style—non-traditional, student-centred, informal, and aiming for more competitive tasks and individualised learning.

For the purposes of this study, personal information data were also collected, including gender, age, nationality, language spoken at home, and course level studied (for students) or taught (for teachers).

3.2 Research venue and participants

The research venue is a university in Melbourne, Australia. Chinese, Japanese, Spanish, French, Italian and German are offered as university electives or as part of a Diploma of Languages. In the Chinese programme, Chinese 1 – Chinese 10 (from beginner level to near-native level of Chinese proficiency) are offered. The number of students enrolled in these courses is approximately 200–300 students per semester.

Among the 48 participating students, 20 are enrolled in Chinese 1, 10 in Chinese 2, and 18 in Chinese 4; in addition, there are 27 female and 21 male students, with an average age of approximately 22 years. The students have diverse cultural backgrounds. Table 1 shows that one-third of the participating students are Australian (33.3%), speaking English at home; over one-third are Vietnamese (35.4%), speaking Vietnamese at home; and the remaining students represent other nationalities (31.3%). Fourteen students (29.2%), about one-third of the student population, speak Chinese dialects at home.

Table 1. Nationality of Participating Students

<i>Identity of each component group</i>	<i>n=</i>	<i>Percentage (Teachers and Students)</i>	<i>Percentage (Participating Students)</i>	<i>Cumulative Percentage</i>
Teachers	7	12.7	---	---
Australian students	16	29.1	33.3	33.3
Vietnamese students	17	30.9	35.4	68.4
English students	1	1.8	2.1	70.5
Maltese students	1	1.8	2.1	72.6
French students	1	1.8	2.1	74.7
Malaysian students	2	3.6	4.2	78.9
Singaporean students	1	1.8	2.1	81.0
Slovak students	1	1.8	2.1	83.1
Indonesian students	5	9.1	10.6	93.7
Serbian students	1	1.8	2.1	95.8
Japanese students	2	3.6	4.2	100.0
Total	55	100.0	100.0	---

The teachers are all female, with an average age of 41 years. All teachers were born in China (see Table 2), except one who was born and grew up in France, coded 'French', and learnt Chinese in both France (for about 5 years) and China (for about 10 years). She has been teaching Chinese language in Australian universities for approximately five years. Another teacher, coded 'English', speaks English at home, although she was born and grew up in China. All teachers are Australian citizens, except for two teachers (one French and one Chinese).

Table 2. Descriptive Data for Participating Teachers

<i>Teachers (Coded Name)</i>	<i>Current Nationality</i>	<i>Birthplace</i>	<i>Language Spoken at Home</i>	<i>Chinese Course Level Taught</i>
Ni	Australian	China	Chinese	Chinese 4
Meng	Australian	China	Chinese	Chinese 1
Fan	Australian	China	Chinese	Chinese 2
French	French	France	French	Chinese 1
YY	Australian	China	Chinese	Chinese 4
English	Australian	China	English	Chinese 1
Lin	Chinese	China	Chinese	Chinese 1
Total	n=7	n=7	n=7	n=7

4 Results and Analysis

The descriptive data for the CLSI, including the mean scores, were calculated through SPSS, first for the whole sample population, and then for participating teachers and students separately (see Table 3). The results were analysed against the cultural norms of the participants. Correlation coefficients were also calculated to analyse the association of the CLSI means scores with the participants' personal data such as gender, age, nationality, language spoken and course level.

4.1 Descriptive Data for the Cultural Learning Styles Inventory

Table 3 shows that the CLSI mean score for the whole participating population for the Collectivist versus Individualist dimension is -3.71. The score for the participating students is -3.58, while that for the participating teachers is -4.57. These scores show that all participants, including the students and teachers lean towards the Individualist style of learning—closer to the norm for Australia. The mean score for the participating teachers (-4.57) is higher than that of the participating students (-3.58), meaning the teachers are closer to the norm for Australia than the students.

In relation to Large versus Small Power Distance, the CLSI mean score for the whole participating population is +1.24. Participating students have a mean score of +0.96, while the teachers' mean score is +3.14. All participants demonstrate a positive score for the dimension of power distance, leaning towards Small Power Distance—again, closer to the norm for Australia, although not as close as the result for the Collectivist versus Individualist dimension. The score for the teachers is substantially higher than that of the students for both the Collectivist/Individualist dimension and the Large/Small Power Distance dimension.

It is worth noting that as the mean scores of the French Chinese teacher (coded 'French') for both examined dimensions are close to the sample means for the whole sample population as well as for the teachers, this 'French' teacher has been included in all the statistical calculations for this study. Besides, her years of Chinese language study (over 15 years), life experience in China (over 10 years), and teaching Chinese language (about 5 years) qualify her to be considered a Chinese language teacher who shares much of the understanding of what learning is about in Asian cultures. Thus, the total number of participating teachers is seven, and the sample size for the statistical calculations is also seven.

Table 3. Descriptive Statistics for CLSI Scores

<i>For Whole Sample Population: Teachers and Students</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>Std. Deviation</i>	<i>Valid Cases</i>
Collectivism	0	8	4.13	1.816	55
Individualism	4	12	7.84	1.803	55
Small Power Distance	1	10	6.05	1.957	55
Large Power Distance	1	10	4.89	1.873	55
Collectivism minus Individualism	-12	4	-3.71	3.594	55
Small Power Distance minus Large Power Distance	-9	9	1.24	3.702	55
<i>For Participating Students Only:</i>					
Collectivism	0	8	4.19	1.841	48
Individualism	4	12	7.77	1.825	48
Small Power Distance	1	9	5.9	1.927	48
Large Power Distance	2	10	5.04	1.833	48
Collectivism minus Individualism	-12	4	-3.58	3.594	48
Small Power Distance minus Large Power Distance	-9	7	0.96	3.638	48
<i>For Participating Teachers Only:</i>					
Collectivism	2	4	3.71	1.704	7
Individualism	5	10	8.29	1.704	7
Small Power Distance	5	10	7.14	1.952	7
Large Power Distance	1	6	3.86	1.952	7
Collectivism minus Individualism	-4	-8	-4.57	3.409	7
Small Power Distance minus Large Power Distance	-1	-1	3.14	3.848	7

The descriptive statistics for the CLSI scores show that little difference exists between male and female participants for the total sample population and for the students in these results. The teachers are all female, so the comparison for this group is invalid.

Table 4. Descriptive Statistics for CLSI Scores: Australian Students, Vietnamese Students and Students Speaking Chinese Dialects

<i>Descriptive Statistics</i>	<i>Australian Students</i>		<i>Vietnamese Students</i>		<i>Students Speaking Chinese Dialects</i>	
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>
Collectivism	3.75	1.571	3.88	.691	5.21	2.082
Individualism	8.25	1.571	8.06	1.6	6.86	1.956
Small Power Distance	5.5	2.098	6.88	.536	5.43	2.623
Large Power Distance	5.38	1.996	4.29	.611	5.57	2.409
Collectivism minus Individualism	-4.5	3.141	-4.18	.206	-1.64	3.992
Small Power Distance minus Large Power Distance	0.12	4.08	2.59	2.83	-0.14	4.823

Table 4 presents the CLSI scores for Australian students, Vietnamese students and students speaking Chinese dialects at home. These three groups are included in the analysis because each group constitutes about 30 per cent of the total sample population, and the analysis can be statistically solid. We have left out the statistics for other nationalities of the student participants as the number for each nationality is too small to be significant for analysis.

The results in Table 4 are significant in three ways. First, the Australian students display a mean score of -4.5 on the Collectivism/Individualism axis. They have moved away from their Australian norm, which is -9 (Hofstede, 1986). Second, on the same axis of Collectivism/Individualism, the Vietnamese students hold a score of -4.18 and have moved closer towards the norm for Australia than their peers. Third, in terms of Power Distance, Australian students (+0.12) and Vietnamese students (+2.59) head in different directions against their own cultural norms, with Vietnamese students moving closer to the norm for Australia while Australian students closer toward the norm for Asian countries. Chinese dialect speakers (-0.14) still sit in the quadrant of the norm for Asian countries though just close to the border line.

If we congregate the CLSI mean scores for all students, all teachers and Chinese dialect speakers (see Table 5), gaps between the students and the teachers can be observed from the scores: -3.58 versus -4.57 for Collectivism/Individualism, and 0.96 versus +3.14 for Power Distance. The gaps are even larger between all teachers and dialect speakers on both cultural dimensions: -4.57 versus -1.64 for Collectivism/Individualism, and +3.14 versus -0.14 for Power Distance.

Table 5. Comparing CLSI Mean Scores: All Students, All Teachers and Dialect Speakers

<i>Descriptive Statistics</i>	<i>All Students</i>		<i>All Teachers</i>		<i>Chinese Dialect Speakers</i>	
	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>
Collectivism/ Individualism	-3.58	3.594	-4.57	3.409	-1.64	3.992
Small/Large Power Distance	0.96	3.638	3.14	3.848	-0.14	4.823

While all students and all teachers are making changes to their traditional ways of learning/teaching, through moving closer to the Western norm, the distance between them in terms of the scores remains large. With regard to whether this gap is statistically significant, the section 'Correlation Coefficients' provides more insight.

4.2 Transferring Cultural Learning Styles Inventory Scores onto the Grid

The CLSI mean scores for the whole population, as well as for the participating students and teachers separately, are transferred onto the grid in Figure 2 to make it visually more straightforward to compare the mean scores of the sample population (indicated by diamonds) with the cultural norms (indicated by dot points). The results show that the mean scores for both students and teachers are located very far from the Asian norms, and very close to the norm for Australia (-9, +3).

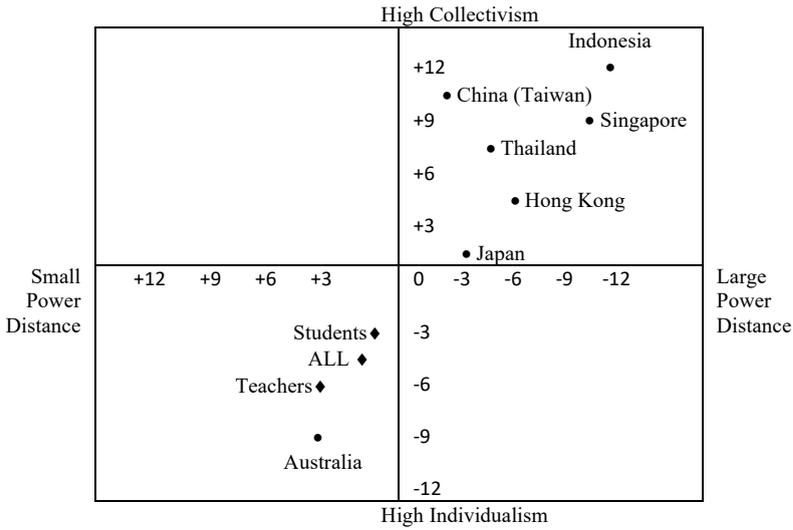


Fig. 2. Sample Means against the Cultural Norms

4.3 Correlation Coefficients

The collected data are analysed through correlation coefficients for the research samples, first for the whole population, and then for students and teachers, separately. The analysis is performed between the selected two cultural dimensions (Collectivist/Individualist and Large/Small Power Distance) and other collected personal information, including gender, age, nationality, language spoken and course level.

The results, as reflected by the Pearson 2-tailed correlation coefficients for the whole participating population (see Table 6), show no significant relation between the Collectivism/Individualism dimension and the other surveyed factors, but a significant negative association (-.274) between Large/Small Power Distance and the course level that the students study and teachers teach. This means that the higher the course level, the higher the level of Power Distance. For students, this may indicate that the more advanced the level of Chinese course that they take, the higher the level of Power Distance they will demonstrate, and the closer they move towards the Eastern way of learning. The same is true for the teachers. This result may imply that both students and teachers tend to opt for more Eastern styles of learning/teaching in higher-level courses.

Table 6. Correlation between CLSI Scores and Other Surveyed Factors (Whole Population)

Assessed Cultural Dimensions	Gender	Teacher or Student	Nationality	Speaks Chinese at Home	Chinese Course Level
Collectivism	.014	-.088	.227	-.134	.039
	.919	.525	.096	.329	.776
Individualism	.012	.096	-.234	.106	.009
	.932	.485	.085	.440	.947
Small Power Distance	.234	.214	-.261	-.085	-.236
	.085	.116	.055	.535	.083
Large Power Distance	-.208	-.213	.239	.068	.307*
	.128	.119	.079	.621	.023
Collectivism minus Individualism	.001	-.092	.232	-.121	.015
	.993	.502	.088	.378	.912
Small Power Distance minus Large Power Distance	.245	.198	-.231	-.086	-.274*
	.072	.146	.090	.530	.043

Total n=55; * Pearson correlation: significant at the 0.05 level (2-tailed)

The results for the participating students only (see Table 7) point to significant differences between students who speak Chinese dialects at home and those who do not for the Collectivism/Individualism dimension. Students who speak Chinese dialects show higher scores in Collectivism than those who do not. It is a significant result in that speaking Chinese dialects at home, to a large extent, may dictate the cultural ways of learning in the classroom.

Students do not present any variation among course levels in both assessed cultural dimensions—Collectivism/Individualism and Large/Small Power Distance.

Table 7. Correlation between CLSI Scores and Surveyed Factors (Students)

<i>Assessed Cultural Dimensions</i>	Gender	Age	Nationality	Speak Chinese at Home	Chinese Course Level
Collectivism	0.045	-0.149	0.222	.362*	-0.009
	0.763	0.313	0.129	0.012	0.954
Individualism	-0.019	0.149	-0.229	-.325*	0.074
	0.899	0.312	0.118	0.024	0.615
Small Power Distance	0.194	-0.044	-0.214	0.157	-0.157
	0.186	0.765	0.144	0.286	0.286
Large Power Distance	-0.165	0.032	0.189	-0.187	0.251
	0.262	0.826	0.197	0.202	0.086
Collectivism minus Individualism	0.032	-0.15	0.227	.346*	-0.042
	0.829	0.309	0.12	0.016	0.779
Small Power Distance minus Large Power Distance	0.211	-0.039	-0.185	0.133	-0.217
	0.149	0.795	0.208	0.369	0.139

Total n=48. * Pearson correlation: significant at the 0.05 level (2-tailed)

The correlation coefficients for the participating teachers (see Table 8) show a significant positive result for Collectivism/Individualism against course level (+.771). This means that the participating teachers rely heavily on Eastern styles of learning/teaching when they teach higher levels of Chinese, although there is a general tendency, as reflected by the CLSI mean scores, for the teachers to move closer to the norm for Australia (see Table 3).

Table 8. Correlation between CLSI Scores and Other Surveyed Factors (Teachers)

<i>Assessed Cultural Dimensions</i>	Age	Nationality	Speak Chinese at Home	Chinese Course Level
Collectivism	-0.514	0.074	-0.115	.771*
	0.238	0.875	0.807	0.043
Individualism	0.514	-0.074	0.115	-.771*
	0.238	0.875	0.807	0.043
Small Power Distance	.854*	-0.258	0.05	-0.401
	0.015	0.576	0.915	0.372
Large Power Distance	-.854*	0.258	-0.05	0.401
	0.015	0.576	0.915	0.372
Collectivism minus Individualism	-0.514	0.074	-0.115	.771*
	0.238	0.875	0.807	0.043
Small Power Distance minus Large Power Distance	.888**	-0.246	0.114	-0.379
	0.008	0.596	0.80	0.402

Total n= 7

* Pearson correlation: significant at the 0.05 level (2-tailed);

* Pearson correlation: significant at the 0.01 level (2-tailed)

This result runs nearly in line with that identified in Table 6, where Large Power Distance is identified for both students and teachers, meaning that both students and teachers are inclined to

lean towards Eastern styles of learning/teaching. However, students alone do not show much variation in the measure for Power Distance against course level (see Table 7). Moreover, the age of the teachers is strongly and positively related to Small Power Distance, meaning that the older they are, the more likely they will rely on the Western style of teaching, as reflected by the association between the Large Power Distance dimension and the teachers' age.

The very high level of association between the Collectivist way of teaching and higher course levels, together with that between Small Power Distance and teachers' age, raises questions about the possible gaps that may exist between how students learn and how teachers teach, and between what students expect and what teachers deliver in the classroom.

5 Findings and Discussion

The analysis of the sample means and the correlation coefficients with the collected CLSI data reveals the following key findings:

1) *All sample population participants are moving away from their own cultural norms:*

- The whole sample population, both students and teachers, demonstrates trends of moving towards the Australian norm for both examined cultural dimensions, more so on the continuum for Collectivism/Individualism than for Large/Small Power Distance. They are moving away from Collectivism and Large Power Distance, which is characteristic of the Eastern way of learning, and closer to Individualism and Small Power Distance, which represents the Western style of learning. In this tendency, teachers display the trend more than students.
- The Australian students participating in this research study are leaving behind their own cultural norm, and treading closer to the Eastern way of learning, although the pace is not as fast as that of their Asian Chinese-learning counterparts.
- Vietnamese students are also moving closer to the Australian norm, much closer than their Asian fellow Chinese learning students.

2) *Both students and teachers at higher levels of Chinese tend towards Eastern learning styles:*

- The results (both the descriptive data and the correlation coefficients) show higher association with Collectivism and Large Power Distance, particularly in higher-level courses, for both students and teachers. This means that both students and teachers hold onto the Eastern style of learning/teaching, which is their cultural norm, when they learn/teach at higher course levels; this is particularly noticeable for older teachers.

3) *Students who speak Chinese dialects at home tend to hold on to their Eastern learning styles:*

- Chinese dialect speakers present higher scores for Collectivism than do those who do not speak Chinese dialects (as shown in Table 4). This result means that speaking Chinese dialects at home may become a 'voice' for the culturally unique ways of learning of these students regarding how they perceive Chinese language learning and how they behave in the classroom.

The above research findings, guided by applying Hofstede's national cultures to the relationship of students and teachers, are significant to Chinese language learning, and internationalised language education in general, in the following ways:

With regard to the first finding, the results reveal that all who participated in the research are migrating away from their own cultural norms and moving towards shared tendencies. Global processes are considered to have some bearing on this change in cultural values by influencing participants' perceptions of what learning is about and what it means to them. This change of beliefs may also be observed in learning and teaching experiences in the Chinese language. In Hofstede's (1986) terms, learners' cognitive skills development is governed and adjusted by the environment in which they live (or study and teach). Cognitive skills development involves language skills building as linguistic function constitutes an essential part of the brain in neurological science (e.g., Danesi, 2003) and linguistic aptitude is established as one of the eight intelligences (Gardner, 1983). This language-cognition-environment deterministic view underlies a trend of Australian students

to move closer to Eastern styles of learning, and Asian students, who are fully proficient in English language, to move closer to Western styles of learning. This movement constitutes a major process for internationalising education as well as major challenges for students and teachers gathering in cross-cultural language-learning classrooms, aiming to create a common ground for their language and culture learning experiences.

The second finding that both students and teachers hold onto their Eastern cultural norms at higher course levels may imply that both students and teachers tend to opt for more traditional and formal ways of learning and teaching in higher-level Chinese courses. While being ideologically attracted to the norms of their cultural counterparts, they have not let go of their traditional culture and beliefs. Again, this situation may directly relate to the participants' learning and teaching experiences in the Chinese language. The more they learn or teach this language, the more they acquire the culture of the people speaking the language. As Brown (1980) claims, learning a second language usually engages learning a second culture (p. 129). However, challenges can mount for teachers who are accustomed to teaching in their traditional ways. For higher-level language courses, communicative skills development, among many other skills such as grammatical and syntactical knowledge about the language, is essential. The core of the Western style of learning demands communicative teaching more than any other teaching approach. Traditional ways of teaching languages may fall behind the expectations of both students and teachers involved in the classroom learning process, particularly for higher-level courses.

The finding that Chinese dialect speakers show higher scores in Collectivism than the rest of the student participants is an expected and noteworthy research outcome in this study. This is the cohort of students who are often caught in the tug-of-war between contrasting cultural values, and who are exposed to changes that are sweeping across global education and are most vulnerable to lose the tug-of-war. Although they may be able to dictate culturally different ways of learning in the classroom, a lack of understanding of both students and teachers of their uniqueness in learning may cause frustration and failure in the learning experiences of these students. In the classroom situation, they may hold onto their traditional ways of learning. Therefore, in language learning, where student interaction and speaking activities are constantly involved, they may lag behind students from Western learning backgrounds, whose oral presentation and communication skills during class are an advantage. The dialect speakers may be handicapped in this process of internationalising education if no targeted actions are taken by the teachers or the students themselves.

6 Implications

As Australia falls within a multicultural Chinese-learning context, the student–teacher relationship should be no exception to what Hofstede (1986) refers to as ‘an archetypal role pair in virtually any society’ (p. 301). The research findings of this study reveal that this archetypal student–teacher connection is strong for both students and teachers in that both show positive associations with the Western style of learning/teaching in general. However, they tend to stick to the Eastern style of learning/teaching if they take higher-level courses, where communicative learning and teaching, which is more characteristic of Western norm, is paramount. They seemingly gather on common ground by making changes to their own traditional cultural norms; however, the gaps they present in terms of the CLSI means scores, and between lower levels and higher levels, warrant attention. In addition, Chinese dialect speakers, who may rely on their traditional ways of learning and teaching for Chinese language, pose huge challenges to teachers. These gaps between Eastern and Western cultural learning styles, and traditional and communicative teaching of languages, may affect the learning and teaching of Chinese in the classroom through student–teacher style conflicts.

The constant clash between Eastern and Western styles of learning and teaching—such as preferences for learner-centred or teacher-centred teaching, traditional (or the grammar translation approach) or communicative teaching, and audio-lingual or natural approaches—can become a constant challenge in teachers' decision-making during teaching practices. Some teaching approaches are more characteristic of Eastern styles of learning (e.g., the grammar translation

method), and some have more features of Western styles of learning (e.g., communicative language teaching). In the classroom learning situation, teachers may struggle in reaching a compromise.

The current study aims to address this compromise by examining students' cultural learning styles and teachers' teaching styles, and by seeking a collaborative approach between students and teachers towards innovative learning and teaching to deal with the challenges posed by the gaps between learning and teaching styles. This may involve changing the philosophy of teaching, adjusting the focus on teaching styles and prioritising the culturally unique ways of learning of the students (Grasha, 1996; Marshall, 1991). Specifically, teachers and students can engage in the following strategies to achieve a collaborative and balanced approach towards quality (Chinese) language programmes.

- **Show understanding:** As the teacher–student interaction is deeply rooted in the culture of a society, acquiring an adequate understanding of the culturally unique ways of learning of the students is a good starting point.
- **Raise awareness and be sensitive:** Teachers have to be aware of and sensitive to the differences between the students' cultural learning styles and their own teaching styles to identify typical behaviour and preferences, and to teach according to the accepted sociocultural assumptions and concepts. An example is designing activities that can engage dialect speakers so they can mingle more comfortably with the other members of the class, such as grouping students to best match the nature of the learning tasks.
- **Reinforce a balanced approach between Eastern and Western cultural learning styles:** Outstanding teaching practice can be achieved through a balanced approach with a combination of Eastern and Western learning and teaching styles, and teacher-centred and learner-centred approaches. This can be achieved by teachers relying on their preferred teaching styles but, in the meantime, switching from their own style to that of their students.
- **Train students to be creative, to be flexible and to adapt to new learning styles:** Teachers can facilitate their students to develop a similar style to theirs where possible (Dunn & Dunn, 1972; Pithers & Mason, 1992). It is equally important to train students to switch from one style to another following the change of learning situations so they can genuinely benefit from the outcomes that can be generated from creative and innovative thinking in the learning process.
- **Accommodate and adjust to other cultural learning styles:** This may involve readiness to change the philosophy of teaching and education where possible and to place high priority on the culturally unique ways of learning of the students. For instance, teachers can adjust their own teaching styles according to how the students are progressing at different course levels. Even though higher-level students may opt more for Eastern styles of learning and lower-level students may rely more on Western styles of learning, teachers can create a balance or a combination of the two so that students can steadily grow their language skills on the ladder of the course structure that we have laid out for them.

7 Conclusions

We constantly deploy theoretical underpinnings and methodological approaches to frame and inform our teaching practices. How students learn and how teachers teach are among the top considerations for this process. Formulating a general commitment to enhancing students' learning through raising awareness among students and teachers will play a major role in our ongoing assessment of learning, teaching and research in Chinese language education. To this end, we need to emphasise the relevance and importance of students' learning styles (and learning strategies as they are closely related)—here, we particularly stress the importance of cultural uniqueness in learning styles.

The balanced approach highlighted in this article in dealing with learners' cultural learning styles is suitable for language teachers and students within the broad spectrum of language education. Through this approach, teachers can see the individual tree (student) and the forest (the whole group) at each stage of teaching, and students can formulate a course evaluation by reflecting on their own

learning experience against the achieved outcomes. Teaching practice that is guided by a balanced cultural learning and teaching approach should be able to transform itself into a forum where students express their beliefs, aspirations and learning successes, and a springboard for appreciating the values of the world's highest level of multiculturalism and multilingualism of Australia (Henderson, 2008). In this manner, teachers, through engaging with students' cultural learning styles, may be able to ensure a successful cultural adaptation for their students and a creative and enjoyable learning/teaching experience for both students and teachers, as well as a smooth transition for students to higher levels of the full suite of (Chinese) language courses.

Finally, the statistical analysis could be strengthened in future investigations if some form of qualitative data were included, such as through interviews with teachers or students. A follow-up research project that extends the current study is under conceptualisation to further verify the principles and rationales that underlie the findings of this study. It intends to make a comparison study on Chinese students' English language learning in China and their Chinese language learning in Australia. The research design may include interviewing teachers and students, as well as incorporating students' learning outcomes for evaluation against cultural learning styles and learning environments. Therefore, the current study exploring Hofstede's cultural dimensions theory in Chinese language learning is only one small step forward on the road to pursuing quality university (Chinese) language programmes, and more is yet to come (Forsyth & Hoyt, 2011).

Notes

1. In language acquisition theories, second language learning differs from foreign language learning in learning contexts. If language learning takes place in a native country (e.g., an Australian learning Chinese in China), it is regarded as learning Chinese as a second language. If learning happens in a non-native country (e.g., an Australian learning Chinese in Australia), it is regarded as learning Chinese as a foreign language. In this article, the term 'language learning' refers to the experience of taking on a new language, either as a foreign language or a second language.
2. Researchers still do not wholly agree on which countries should fall under the Confucian tradition, which most of the East Asian countries share. However, there is a general consensus that China, Taiwan, Hong Kong, Singapore, Korea and Japan are the main countries that fall under the aegis of the Confucian ethic (e.g., Biggs & Watkins, 1996).

References

- Biggs, J. B. (1978). Individual and group differences in study processes. *British Journal of Educational Psychology*, 48, 266–279.
- Biggs, J., & Watkins, D. (1996). The Chinese learner in retrospect. In D. Watkins & J. Biggs (Eds.), *The Chinese learner: Cultural, psychological, and contextual influences* (pp. 269–285). Hong Kong: Comparative Education Research Centre.
- Brown, H. (1980). *Principles of language learning and teaching*. Englewood, NJ: Prentice Hall.
- Cheng, M., & Banya, K. (1998). Bridging the gap between teaching style and learning styles. In J. Reid (Ed.), *Understanding learning styles in the second language classroom* (pp. 71–79). Englewood, NJ: Prentice Hall.
- Conti, G. (1989). Assessing teaching style in continuing education. In E. Hayes (Ed.), *Effective teaching styles* (pp. 3–16). San Francisco, CA: Jossey-Bass.
- Cornett, C. (1983). *What you should know about teaching and learning styles*. Bloomington, IN: Phi Delta Kappa.
- Cothran, D. J., Kulinna, P. H., Banville, D., Choi, E., Amade-Escot, C., MacPhail, A., ... Kirk, D. (2013). A cross-cultural investigation of the use of teaching styles. *Research Quarterly for Exercise and Sport*, 76, 193–201.
- Crichton, J., & Scarino, A. (2007). How are we to understand the 'intercultural dimension'? An examination of the intercultural dimension of internationalisation in the context of higher education in Australia. *Australian Review of Applied Linguistics*, 30(1), 4.1–4.21.
- Danesi, M. (2003). *Second language teaching: A view from the right side of the brain*. Springer Science & Business Media.
- Dunn, R., & Dunn, K. (1972). Learning styles/teaching styles: Should they ... can they ... be matched? *Educational Leadership*, 36, 238–244.

- Dunn, R., Gemake, J., Jalali, F., & Zenhausern, R. (1990). Cross-cultural differences in learning styles of elementary-age students from four ethnic backgrounds. *Journal of Multicultural Counseling and Development, 18*, 68–93.
- Dunn, R., & Griggs, S. (1988). *Learning styles: Quiet revolution in American schools*. Reston, VA: National Association of Secondary School Principals.
- Fan, W., & Ye, S. (2007). Teaching styles among Shanghai teachers in primary and secondary schools. *Educational Psychology, 27*, 255–272. doi:10.1080/01443410601066750
- Forsyth, D. R., & Hoyt, C. L. (2011). *For the greater good of all: Perspectives on individualism, society, and leadership*. New York, NY: Palgrave Macmillan.
- Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. New York, NY: Basic Books.
- Goodenough, D. (1976). The role of individual differences in field dependence as a factor in learning and memory. *Psychological Bulletin, 83*, 675–694.
- Grasha, A. F. (1996). *Teaching with style: A practical guide to enhancing learning by understanding teaching and learning styles*. Pittsburg, PA: Alliance.
- Guild, P. B. (2001). Diversity, learning style and culture. *New Horizons for Learning*. Retrieved on December 10, 2017, from <http://www.newhorizons.org/strategies/styles/guild.htm>
- Henderson, J. (2008). Politics and policy-making for Asia literacy: The Rudd Report and a national strategy in Australian education. *Asian Studies Review, 32*, 171–195.
- Hofstede, G. (1980). *Culture's consequences—International differences in work-related values*. Beverly Hills, CA: Sage.
- Hofstede, G. (1986). Cultural difference in teaching and learning. *International Journal of Intercultural Relations, 10*, 301–320.
- Hofstede, G. (1991). *Cultures and organizations: Software of the mind*. London, United Kingdom: McGraw-Hill.
- Hofstede, G. (2001). *Cultures consequences: Comparing values, behaviors, institutions and organizations across nations* (2nd ed.). London, United Kingdom: Sage.
- Holland, J. L. (1973). *Making vocational choices: A theory of careers*. Englewood Cliffs, NJ: Prentice-Hall.
- Jung, C. (1923). *Psychological types*. New York, NY: Harcourt Brace.
- Kagan, J. (1965). Individual differences in the resolution of response uncertainty. *Journal of Personality and Social Psychology, 2*, 154–160.
- Keefe, J. (1979). Learning style: An overview. In J. Keefe (Ed.), *Student learning styles: Diagnosing and prescribing programs* (pp. 1–17). Reston, VA: National Association of Secondary School Principals.
- Keefe, J. (1987). *Learning style theory and practice*. Reston, VA: National Association of Secondary School Principals.
- Kinsella, K. (1995). Understanding and empowering diverse learners in ESL classrooms. In J. Reid (Ed.), *Learning styles in the ESL/EFL classroom* (pp. 170–194). Boston, MA: Heinle & Heinle.
- Kogan, N. (1971). Educational implications of cognitive styles. In G. Lesser (Ed.), *Psychology and educational practice* (pp. 242–292). Glenview, IL: Scott Foresman.
- Kolb, D. (1976). *Learning style inventory technical manual*. Boston, MA: McBer.
- Li, N. L. (2015). Cultural learning styles—“Is there such a thing?” In W. M. Chan, S. K. Bhatt, M. Nagami & I. Walker (Eds.), *Culture and foreign language education: Insights from research and implications for the practice* (pp. 265–298). Germany: De Gruyter Mouton.
- Li, N. L., & Gao, B. Q. (2018). Education leadership and curriculum design: Towards quality Chinese language programmes in Australian universities. *Electronic Journal of Foreign Language Teaching, 15*(Suppl. 1), 192–205.
- Marshall, C. (1991). Teachers' learning styles: How they affect student learning. *The Clearing House, 64*, 225–227. Retrieved from <https://www.jstor.org/stable/30188595>
- Nelson, G. (1995). Cultural differences in learning styles. In J. Reid (Ed.), *Learning styles in the ESL/EFL classroom* (pp. 3–18). Boston, MA: Heinle & Heinle.
- Nettelbeck, C., Byron, J., Clyne, K., Dunne, M., Hajek, J., Levy, M., ... Wigglesworth, G. (2009). *An analysis of retention strategies and technology enhanced learning in beginners' languages other than English (LOTE) at Australian universities*. Canberra, ACT: Australian Academy of the Humanities.
- Oxford, R. (1990a). *Language learning strategies: What every teacher should know*. New York, NY: Newbury House Publishers.
- Oxford, R. (1990b). Styles, strategies, and aptitude: Connections for language learning. In T. Parry & C. Stansfield (Eds.), *Language aptitude reconsidered* (pp. 67–125). Englewood, NJ: Prentice Hall.

- Oxford, R., Ehrman, M., & Lavine, R. (1991). Style wars: Teacher–student style conflicts in the language classroom. In S. Magnan (Ed.), *Challenges in the 1990s for college foreign language programs* (pp. 1–25). Boston, MA: Heinle & Heinle.
- Oxford, R., Hollaway, M., & Horton-Murillo, D. (1992). Language learning styles: Research and practical considerations for teaching in the multicultural tertiary ESL/EFL classroom. *System*, 20, 439–456.
- Peters, M. A. (2015). Socrates and Confucius: The cultural foundations and ethics of learning. *Educational Philosophy and Theory*, 47, 423–427. doi:10.1080/00131857.2014.930232
- Pithers, R., & Mason, M. (1992). Learning style preferences: Vocational students and teachers. *Australian Educational Researcher*, 19(2), 61–71.
- Ramburuth, P. (1998). “Keep the fire in me”: Teaching advanced ESL learners through their learning styles. In J. Reid (Ed.), *Understanding learning styles in the second language classroom* (pp.71–79). Englewood, NJ: Prentice Hall.
- Rao, Z. (2003). Bridging the gap between teaching and learning styles in East Asian contexts. *TESOL Journal*, 2(11), 5–11.
- Rayner, S. (2015). Cognitive styles and learning styles. In J. D. Wright (Ed.), *International encyclopedia of the social and behavioral sciences* (2nd ed., Vol. 4, pp. 110–117). Oxford, United Kingdom: Elsevier.
- Rayner, S., & Cools, E. (2011). Chapter 1: Setting the scene: The journey toward a paradigm shift. In S. Rayner & E. Cools (Eds.), *Style differences in cognition, learning, and management: Theory, research, and practice* (pp. 1–16). New York, NY: Routledge.
- Reid, J. (Ed.). (1995). *Learning styles in the ESL/EFL classroom*. Boston, MA: Heinle & Heinle.
- Reinert, H. (1976). One picture is worth a thousand words? Not necessarily! *Modern Language Journal*, 60, 160–168.
- Scott, C. (2010). [The enduring appeal of ‘learning styles’](#). *Australian Journal of Education*, 54, 5–17.
- Sternberg, R. J. (1988). Mental self-government: A theory of intellectual styles and their development. *Human Development*, 31, 197–224.
- Sternberg, R. J. (1997). *Thinking styles*. New York, NY: Cambridge University Press.
- Tweed, R., & Lehman, D. (2002). Learning considered within a cultural context: Confucian and Socratic approaches. *American Psychologist*, 57, 89–99.
- Willing, K. (1993). *Learning styles in adult migrant education*. Sydney, NSW: National Centre for English Language Teaching and Research, Macquarie University.
- Willing, K. (Ed.). (1998). *Understanding learning styles in the second language classroom*. Englewood, NJ: Prentice Hall.
- Witkin, H. A. (1962). *Psychological differentiation: Studies of development*. New York, NY: Wiley.
- Witkin, H. A. (1976). Cognitive style in academic performance and in teacher–student relations. In S. Messick & Associates (Eds.), *Individuality in learning* (pp. 38–72). San Francisco, CA: Jossey-Bass.
- Zhang, L. F., & Sternberg, R. J. (2001). Thinking styles across cultures: Their relationship with student learning. In R. J. Sternberg & L. F. Zhang (Eds.), *Perspectives on thinking, learning and cognitive styles* (pp. 197–226). Mahwah, NJ: Lawrence Erlbaum.
- Zhang, L. F., & Sternberg, R. J. (2012). Culture and intellectual styles. In L. F. Zhang, R. J. Sternberg & S. Rayner (Eds.), *Handbook of intellectual styles: Preferences in cognition, learning and thinking* (pp. 131–152). Springer Publishing.