
CHINESE ADULTS' SELF-REGULATED LEARNING, LEARNING STYLE, AND DEMAND OF ADAPTIVE TEACHING IN ENGLISH LEARNING- COMPARISON AMONG METROPOLITAN CITIES OF MAINLAND CHINA, TAIWAN, HONG KONG AND MACAO

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Received: Oct. 2018 Accepted: Nov. 2018 Published: Dec. 2018

Abstract: English is an international official language and therefore it has been the first foreign language for pupils in the most countries and arenas. Although Mandarin is the majority's mother tongue in the world, English learning is crucial in school education and continuing learning in Chinese society. Accordingly, the paper was aimed at adults continuing learning English in nonformal and informal tracks to explore their self-regulated learning, learning style and demand of adaptive teaching with the focus on comparison different Chinese in six metropolitan cities of Mainland China, Taiwan, Hong Kong and Macao i.e. Beijing, Shanghai, Taipei, Kaohsiung, Hong Kong and Macao. Comparative research was used as the methodology and six questionnaire surveys and six focus group discussions in six cities were conducted to collect empirical data according to different research questions. Totally, 919 valid adult learners were sampled from questionnaire surveys and 49 English teachers and experts were invited for focus group discussions. There were different findings in adults' learning English in terms of SRL, LS, and DAT among six cities of Chinese society. Potential causes of differences in historical, cultural, and educational backgrounds among six cities were raised to explain the research findings. The characteristics of Chinese adults' self-learning in English were also targeted to be formulated.

Keywords: Self-Learning, Self-Regulated Learning, Learning Style, Demand Of Adaptive Teaching, Chinese Adult's Learning In English.

Introduction: English is the first foreign language in Chinese society across the Taiwan Strait i.e. Mainland China, Hong Kong, Macao, and Taiwan, although people speaking Chinese are the largest majority in the world. Learning English therefore has been a key course for all basically from primary education. Since Hong Kong was the colony of Great Britain before 1997 and English was the official language, people might be much more familiar with English than the other three areas. Recently, Prime Minister Li in Taiwan even announced to consider to take English as the second official language (The Executive Yuan, 2017). In addition to compulsory education, learning English is also significant for upgrading people's education and competitiveness in workplace. Hence, English has become a popular course in the four Chinese areas and people continued learning for multiple purposes.

Self-learning is a chief learning strategy in learning English for adults who are apt to learning English independently rather than in class. This is one of the characteristics of adult learning due to their physical and psychological traits, which are different from younger and school students and gradually formulate to individual learning preference and style. Whether adults who have different literacy of self-learning and learning style in learning English would have different demands in adaptive teaching would be an interesting question to be further explored. In the research, self-regulated learning was defined as the specific strategy of self-learning to research upon its relationship with learning style and demands of adaptive teaching in terms of adult's learning English.

People living in metropolitan cities might have higher needs and more resources in learning English and that is the reason why six cities in four Chinese areas were chosen as the subject cities to sample our subjects i.e. Beijing, Shanghai, Taipei, Kaohsiung, Hong Kong and Macao. Actually, there are many differences among the six cities such geographic size, population, economic conditions, education system, and political and cultural history and so on. In terms of research in comparative education, these differences have to be controlled to decrease their potential effects on research variables (Schlegel, Rudelson, and Tse, 2012). For example, both the ratio of sampling and explaining the research findings have to referred to the above differences among six cities.

Accordingly, the objectives of the research were to compare the Chinese adults' self-regulated learning (SRL), learning style (LS), and demand of adaptive teaching (DAT) in English learning among six cities of Mainland China, Taiwan, Hong Kong and Macao.

Literature Review:

Adult's Learning English Reflecting His/Her Learning Characteristics: There are differences between adults and younger learners in learning English. For traditional students, schools at different stages are the major institutions for their learning English. Namely, formal education system is the crucial source for their English learning. But, after finishing the formal education, non-formal education system becomes the main track for people who are aged over 18 and away from formal education. The situation is similar in Chinese education systems and society. Additionally, preference to self-learning is the core characteristic for adult's learning English. Tang (2008) argued that adult's learning characteristics are the critical factors to stimulate English learning. Chau (2008) highlighted that the significance of realizing adult's learning characteristics for teachers to adopt individualized strategies will improve the learning effectiveness. Even in learning English verbal expression, adult's learning characteristics and learning style would be significant for teacher's individualized instruction (Houng, 2009).

Self-learning with autonomy is the important strategy for adult's learning English. Three conditions were raised for autonomous self-learning i.e. mature psychological development, intrinsic learning motivation, and effective learning strategies (Tsung and Wang, 2006). These three conditions have been composed of a part of concepts and theories in self-regulated learning developed by Zimmerman (Wang, 2000 and Zimmerman, 1998). Researches in Chinese society have also mostly shown that a part of SRL would be helpful in learning English including listening (Lui, 2006), in application and interaction (Chiu, 2006), and linguistics (Lui, 2005). Linking to cooperative learning, the effectiveness of SRL in learning English would be better (Lee, 2008 and Lee, 2006). However, lacking in autonomous self-learning was the major problem of Mainland China's students in learning English (Sui, 2008). The above perspective indicates the core issue in learning English in Chinese education and society.

LS and SRL as the Personalized Strategies: There has been literature on self-learning English in Chinese education and society to be reviewed. Wang (2008) and Tain (2009) focused on university's students' motivation in English self-learning and Wang (2008) found that SRL could predictively explain 43.9% of competency in English writing. The impact of SRL in effectiveness of learning English has been explored in different domains such as in verbal fluency (Chang, 2007), cognitive ability (Law, Chan, and Sachs, 2008), grammar (Jiang, 2007), self-evaluation and reflection (Chen, 2008; Kavaliauskienė and Kaminskienė, 2009) and even in German (Wong, 2007). Although, some of the subjects in the above literature were not adults, most of researches have pointed out that SRL is a key factor in learning English.

LS is formed from adult's individualized learning characteristics and has a close relationship with SRL. In learning English, reading materials is not the main methods like other topics of learning rather than using more methods through listening, singing, watching movies and short films from YouTube and other media on the Internet. Namely, when learning English, adult learners are much more possible to apply multiple materials, tracks and media. These learning practices are usually to be shown in the surroundings of adult distance learning. Accordingly, in learning English, adult's LS could be much

more different. Some adult learners would prefer reading, another prefers listening, and the other prefers role playing or practice in the real context. Hence, what is the relationship between individualized LS and SRL and how it may affect the learning effectiveness would be valuable to be revealed.

Matching LS is a basis for developing individualized teaching strategies. Kennedy (2002) found out that adult learners in Hong Kong are likely to accept new teaching methods compared with younger students. The different learning habits and preferences are based on personal learning characteristics such as interest, motivation, experience, ability, and culture. The above learning characteristics of adult learners not only in the context of China but also in other countries need more studies to get more understandings (Heo and Joung, 2004). These understandings would be the foundation for developing adaptive theory (Corno, 2008). Adaptive theory is helpful for instructors to develop suitable teaching methods to meet the individual learner's need based on their difference in learning characteristics. Therefore Kolb, Honey, and Mumford used four learning modes to establish their theory and instrument for LS (Cuthbert, 2005; Loo, 2004).

DAT according to individualized different SRL and LS: The DAT has been enhanced due to the research findings in Chinese adult distance learning. For instance, stimulating learning motivation, enriching cognitive strategies, writing reflective daily learning record and the significance of formative evaluation (Liu, 2007) have been argued as helpful individualized strategies for learning English via the Internet (Peng, 2007; Tong, 2009). Zhou (2002) stressed that individualized teaching is a necessary trend for adult's English learning in China's distance education. Individualized teaching and SRL have also been proofed to be positive factors for English learning effectiveness (Luo, 2008; Wang, 2004; Wang, 2008). Distance learning in English via multiple media and technologies has been therefore recommended to be significant for Chinese adults (Chia, 2005; Xiao, 2007). Up to the era of mobile learning, adult learning via mobile facilities such as notebook, ipad, smart cell phone and upcoming new technological products would be much more conveniently.

The Effective Application of AT based on the Understanding of Individual Adult's SRL and LS: Realizing the relationship between adult's SRL and English learning would be useful to develop individualized teaching strategies (Liu, 2006; Shang, 2008). For adult learners, they have to understand their learning characteristics in SRL and LS according to their past experiences and self-realization. They also are able to seek professional counseling and guidance from educational institutions. For English instructors, they can obtain adult learners' personal records in learning or different learning measures from professional division of student affairs in education institutions. This is what Sifakis (2003) recommended to design curricula of English for Specific Purpose by integrated model and framework of adult education. As Sadler-Smith and Smith (2004) noted, effective teaching strategies are based on students' different style and preference for kinds of stakeholders in teaching and also have the similar implication in adaptive teaching. But, because of the diversity of adults' learning characteristics in SRL and LS, the development of corresponding AT required much more researches to collect valuable findings (Guo, 2006; Van Den Berg, Slegers and Geijsel, 2001). The above target is also highly demanded in the field of adults' learning English.

Methodology: The research was conducted through multiple qualitative and quantitative methods to achieve the higher reliability and validity.

Methods for Data-Collections and Subjects:

1. **Questionnaire surveys:** Questionnaire surveys were used to collect data of adult learners' SRL, LS and DAT in six cities of four areas across the Taiwan Strait. The numbers of subjects of each city was calculated according to the ratio of population. Table 3.1 shows the proposed numbers of subjects from different adult learning institutions in six cities.

Table 3.1: Subjects for Questionnaire Surveys

Distance and university extension institutions		Community colleges(university) and social education institutions	Total
Taiwan			300
Taipei	150	50	200
Kaohsiung	70	30	100
Mainland China			600
Beijing	170	80	250
Shanghai	250	100	350
Hong Kong	110	40	150
Macao	50	20	70
Total	800	320	1120

The stratified random sampling was used to select the two kinds of institutions first and then the subjects from the sampled. Questionnaire surveys outside Taiwan were conducted under the assistance of professional academia and practitioners in Beijing's and Shanghai's Commission of Education Research, Macau City University, and Hong Kong's Baptist University. Questionnaire surveys inside Taiwan were finished by two research assistants.

Finally, the valid number of subjects was 919. The numbers of subjects of each city were as follows: Taipei, 169; Kaohsiung, 92; Beijing, 228; Shanghai, 286; Hong Kong, 74 and Macao, 70. Comparatively, valid subjects of Hong Kong are a bit insufficient as proposed. The result also shows the difficulty in large size questionnaire surveys because every subject has to fill out the form for Research Ethic Admission.

2. Focus Group Discussions: Six focus group discussions were carried out in six cities after the analyses of questionnaire surveys to further explore the potential causes and meanings of statistic findings. 8 participants for each group discussion were proposed and they were all professional academia and practitioners in adult learning and English teaching. Six focus group discussions were all chaired by the author and conducted in the above two commissions, two universities outside Taiwan and in two universities in Taiwan. Therefore, the author was able to contact each participant, to manage and to understand the process. Finally, 49 participants were involved in i.e. Taipei, 9; Kaohsiung, 8; Beijing, 8; Shanghai, 7; Hong Kong, 10 and Macao, 7.

Instruments: There were three instruments for measuring SRL, LS, and DAT.

1. SRL: Adults' Self-regulated Learning Scale was development by the research based on theories and practice. It had 28 items within six dimensions and proofed to be a reliable instrument with a high validity (Wang, 2004).
2. LS: Scale for measuring learning style was developed by Kolb in 1985 and named Learning Style Inventory. It has only 14 items grouped into three kinds of learning style. Cronbach α of the instrument was between .73 to .83 with acceptable validity.
3. DAT: The author referred to Kau (2006), Sharp, Pocklington, and Weindling (2002) to develop Adult's Demand of Adaptive Teaching Scale. It was organized from five core elements of teaching i.e. objective, content, method, evaluation, and support. There were four items in each dimension with 5-point Likert-style to be answered. The instrument has been proofed as a reliable and validity scale.

Data Analyses: Data analyses were composed quantitative and qualitative methods. Quantitative data collected via questionnaire surveys were analyzed by One way and two-ways ANOVA, T test, Correspondent Relationship of SPSS software. Qualitative data collected via focus group discussions were analyzed by content analysis with Nvivo 11 to find out the common terms mentioned by participants and frequency of mentions. The cited discussion content was coded by one letter and

number i.e. city-participant order. For instance, B₁ means participant 1 in Beijing. Data collected and analyzed were conducted from December, 2015 to June, 2017.

Research Findings and Discussions: The differences in SRL of adults' learning English among six cities

Table 4.1: Differences in SRL

	B	S	T	K	H	M
DS ₁						
DS ₂						
DS ₃	B>M	S>T S>M				
DS ₄	B>M					
DS ₅		S>T S>M				
DS ₆		S>B	T>B	K>B		M>B
The whole						

- p.s. 1. DS₁ to DS₆ mean six dimensions of SRL
 2. All with p<.05, p<.01 or p<.001

There were 10 significant differences found in SRL of adult's learning English among six cities. Accordingly, adult learners in Shanghai were better in DS₃, DS₅, and DS₆ than Taipei, Macao, and Beijing i.e. control of learning contents, self-concept of learning, and seeking learning partners. **Shanghai is a large, old and international business city and English is popular and focused by city government (S₂, S₄, S₆).** Adults in Shanghai have more resources and demands of learning English. **The accessibility of learning English lets them feel more comfortable and with higher confidence in controlling learning contents (S₃).** As that adult learners are significant worse in seeking learning partnership than other four cities, the possible cause is that **traditionally, distance learning via TV and the Internet is independently. One to one is popular in English learning (B₁, B₈).** Adults in Beijing also have **a higher pressure in living, which results in less seeking learning partnership (B₁, B₈).** The findings imply that there are historical, geographic, political, educational and psychological causes that may result in the difference in SRL. The findings that adults in Taiwan and Macao are worse in DS₃ and DS₅ than in Shanghai may result from the smaller sizes of city and population but the potential cause needs further exploration.

Table 4.2: Differences in LS

	B	S	T	K	H	M
L ₁			T>B T>S T>K			
L ₂		S>B S>T S>K S>H S>M				
L ₃						

- p.s.1. L₁ to L₃ mean three dimensions of LS
 2. All with p<.05, p<.01 or p<.001

The findings shown on Table 4.2 are obviously interesting. Firstly, adult learners in Taipei prefer learning via vision than those in Beijing, Shanghai, and Kaohsiung. Adult learners in Shanghai are highly fond of learning via hearing. Taipei is the capital city of Taiwan with the best surroundings of English. Traditionally, the majority of Taiwan learned English from school education. Adult learners who learned

English via reading and watching therefore became the majority in Taipei, even significantly more than in Kaohsiung. **They are also used to learning English via the Internet, reading materials and are much more vision-oriented (T₂, T₃). The people's habit of learning English in Taipei is originated in formal school education and supplementary education mainly for the objectives of examination (T₇, T₈, T₉).** Shanghai is an international business harbor city and has developed with a long history. There are many foreign banks, enterprises, businessmen and international conventions in the city. For most people in Shanghai, adults are easier to meet and talk to foreigners around their living areas and workplaces. **Learning English is always the policy focus of city government (S₁, S₂, S₅) and have been recommended (Chia, 2005; Xiao, 2007).** Besides, **the mass transportation is convenient for this large population of city and people have more opportunities to listen to English when commuting via hearing broadcasting (S₃, S₆).** Listening is also the major style of English tests that results in most of people in Shanghai being fond of learning English via hearing (S₁, S₃, S₇). Accordingly, adult's past learning habit formed in school education affects their learning preference in continuing English learning.

Table 4.3: Differences in DAT

	B	S	T	K	H	M
DS ₁				K>M		
DS ₂	B>M	S>M		K>T K>H K>M		
DS ₃				K>T		
DS ₄		S>M				
DS ₅				K>T K>M		
The whole	B>M	S>M		K>T K>M		

p.s.1. D₁ to D₅ mean five dimensions of DAT

2. All with $p < .05$, $p < .01$ or $p < .001$

Table 4.3 indicates two apparent results. Adult learners in Kaohsiung have higher demands of AT in three dimensions and the whole especially, higher than those who in Taipei and Macao. Adult learners in Macao are significant lower in demands of AT than those who in Beijing, Shanghai, and Kaohsiung. The finding was decoded that **adults in Macao did not focus on English learning and hence they had lower demands of AT (M₁, M₃, M₅, M₆).** In SRL, adults in Macao had higher scores in the dimension of seeking learning partnership than those in Beijing. **In Macao, people like to learn English in a group and travelling is usually the main purpose of leaning English. Therefore, they have less demands in AT because they already have group friends for supporting (M₁, M₇).** As to the other finding, **Kaohsiung is less internationalized and its surroundings of learning English is still not good enough compared with other five cities (K₂, K₄, K₅).** It is usually criticized on **lacking friendly English environment for foreign people (K₁, K₆, K₇).** As a result, adult learners have higher demands in contents of AT than those who in other cities. The phenomenon implies that adults in Kaohsiung require more AT due to their insufficiency in resources for learning English.

Additionally, that adult learners in Hong Kong were not found to have significantly higher scores in SRL, LS and DAT is a bit of out of expectation since English is the official language there. The finding is explained that adults in Hong Kong are much more familiar with English from the living environment and school education. **Learning and using English have been a part of daily affairs and therefore they do not reflect higher scores in three variables (H₄, H₅, H₇, H₈).** As Kennedy (2002) pointed out, adult learners in Hong Kong are likely to accept new teaching methods. Besides, Henning (2010) found that learning language was a process of self-forming for people in Hong Kong. It implies that they have higher motivation and intension in trying new things.

As to the differences in social demographic variable, adults who participated in formal education were better in five dimensions of SRL, except in controlling learning contents. Adults who participated in formal education were preferred L1 and L2 of LS. Younger adult learners had higher demands of AT than other older groups. Obviously, adult learners in formal education are better in learning competency because of the entering examinations and more structured teaching. That is much more different from nonformal education which is much more learner-oriented and less organized learning. Accordingly, adult learners in formal education hence could have higher confidence in learning English and prefer to L1 and L2. The cause of the finding is similar to the difference in ages, as previous researches indicated (Tsung and Wang, 2006; Wang, 2000 and Zimmerman, 1998). Younger learners have less experiences and confidence and therefore demand higher AT than older age groups.

Conclusion: The research has revealed many valuable findings which are applicable to the practices and further studies. The followings in four dimensions are raised as recommendations of the author.

For adult education institutions: setting up learners' individualized learning databases for providing respondent learning supports in Chinese four areas: Providing necessary learning supports to adults who are English self-learners are the crucial responsibility of adult education institutions. Self-learning is not isolated learning and it also needs administrative and psychological supports to self-learners. Adult education institutions can measure adult learners' SRL, LS and DAT via subjective instruments and save the testing results in computer database. For instance, institutions in Kaohsiung have to focus on adult learners' demands of different dimensions of AT. With the improvement and application of Big Data, the responsible departments of the institutions can analyze accumulated testing results in years to find out significant and valuable statistic outputs about adult English self-learning. The results can be applied for institutional following administrative supports and transferred to instructors for their adaptive teaching English according to individualized differences of adults.

For instructors: responding to individualized differences of adults to develop adaptive teaching and psychological supports in Chinese four areas: Instructors can obtain testing results of adults in SRL, LS and DAT and relevant Big Data analyses from the responsible department of the institutions, actively and passively. These data are significant for instructors to understand the individualized differences in their adult students and according develop adaptive teaching contents and skills in class English teaching and mostly important in individual tutoring and consulting. For example, instructors in Taipei's institutions have respond to adult learners' preference to learning English via vision and instructors in Shanghai's have to use more hearing teaching. Since adaptive teaching is easily conducted in small group and personal guidance, besides individualized learning supports, instructors are able to apply adaptive teaching in collaborative English learning group that is helpful to enhance the effectiveness of SRL. Surely, instructors are expected to keep learning to enrich their literacy in individualized teaching such as AT.

For Chinese adult learners: realizing self's SRL, LS and DAT to achieve higher learning effectiveness: For adult learners themselves, they have to strive to understand self's characteristics in SRL, LS and DAT for individualized English learning strategies and supports. The understanding can attain via taking actively subjective measurement or getting the testing results conducted by the institutions. Adult learners are also recommended to refer to their instructors' professional comments and suggestions in English self-learning. The understanding would be not only helpful in personal English SL but also in collaborative groups. Specifically, Adult learners in Kaohsiung need actively ask for more supports in different dimensions of AT. Adult learners in Taipei can ask more English materials learned from vision. Adult learners in Shanghai can ask more English teaching via hearing to meet their personalized characteristics.

For further researchers: continuing studies upon Chinese's learning English via SRL, LS and DAT to explore their potential characteristics: Learning English has been significant and popular in

Chinese areas with a long history. The research focuses on the differences inter the groups of four parts of China in SRL, LS, and DAT. There have been differences found in six cities of the four parts of Chinese societies. The results do pave a way for further exploration in Chinese's learning English. However, the difference in learning English between Chinese and other societies need more studies. The particular pattern of Chinese in learning English in terms of SRL, LS, and DAT has still been unclear in the field of adult education and English teaching. More researches are expected to follow this study to get involved more critical issues to find out and then set up the model of Chinese SRL in English, different from other countries.

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