The Social Science



# The Changes in Chinese Postgraduate Student's Conceptions of Learning as a Result of Studying Abroad

[1, 2]Liu Hai and [3]Yang Xiaoping
[1]*Faculty of Education, Overseas Education College, Southwest University, Chongqing 400715, China*
[2]*Chengdu University, Sichuan 610106, Chengdu, China*
[3]*Faculty of Education, Southwest University, Chongqing 400715, China*

**Key words:** Learning, conception, quasi experiment, COLI

**Corresponding Author:**
Yang Xiaoping
*Faculty of Education, Southwest University, Chongqing 400715, China*

Page No.: 70-79
Volume: 16, Issue 4, 2021
ISSN: 1818-5800
The Social Sciences


**Abstract:** The study attempted to conduct Quasi-experiment by compromising the control group and experimental group which already exist in Chinese students doing their postgraduate degree in the United Kingdom and Chinese universities, to compare and contrast their learning conceptions due to diverse learning environments and culture. Thus, we used the Conceptions of Learning Inventory (COLI) to assess both groups to identify and examine their means of knowledge acquisition. Likewise, the study's finding enlightens that Chinese students in the UK and Chinese universities did not exhibit significant learning conception difference. However, our evidence indicated that Chinese students are still stacked with Confucius's learning style and rote learning in both learning environments.

## INTRODUCTION

Studies abroad for acquiring higher education and student mobility at the international level are overgrowing. Amongst these international students, Chinese students have become the largest group in the major English-speaking countries including the UK, Australia, Canada, New Zealand and the UK[1]. Thus, these students come from different learning backgrounds and cultures that influence their learning. The study of Marton *et al*.[2] suggests that student's learning conceptions are largely influenced by their previous educational experiences which have formed before they come to university. Besides, these conceptions of learning are shaped by the learning context. In other words, student's learning conceptions are profoundly affected by the learning environment where they receive a formal education.

Moreover, except from the learning environment, cultural context is also an essential factor in student's learning conceptions[3-5]. For instance, Chinese student's conceptions of learning are rooted in the traditional Chinese culture the Confucian heritage which is different from western culture[6]. To embrace the new educational experience of studying abroad is not always easy[4]. Thus, this study sought to shed light on Chinese student learning conception behavior by considering overseas and home universitie's teaching and pedagogy disparities. Generally, there are two stereotypes of Chinese learners in educational research. Firstly, according to Carson[7] and Biemans and Van Mil[8], most Western educators perceive Chinese students as passive learners who rely on rote learning and lack creative thinking. Secondly, Chinese learner's successful academic achievement[9] characterizes Chinese students as active and reflective thinking and a

spirit of inquiry. These stereotypes on Chinese learners are primarily due to the studies[4, 10] which argue that Chinese students perceive memorization and understanding as interlocked processes that contribute to each other.

To better understand Chinese student's learning experience, higher education professors and administrators need to see learning in student's views. Since Chinese students are becoming the most massive international most extent in UK universities, exploring Chinese student's conceptions of learning and their learning conceptions developed in the UK universities could help universities understand better and support them. This study's findings can also help understand other international student's characteristics with a similar cultural background with Chinese students[11,4]. Therefore, our primary purpose is to provide a better understanding of the Chinese postgraduate student's conceptions of learning; secondly, this study is designed to explore whether the experience of studying abroad affect student's conceptions of learning; thirdly, this study is intended to distinguish the learning conceptions between Chinese postgraduate students who are currently studying in the UK and China higher institutions.

**Literature review:** Before university access, most students have fundamental learning, adequate knowledge and emotions; these conceptions of learning change with the learning environment[4]. Nevertheless, previous research encourages concentrating on language proficiency, academic stress and different Chinese student's learning in British universities[12, 13]. Yet few investigations focus solely on Chinese postgraduate student's conceptions of learning and the impact of change study in British universities. Recent research assisted in a particular area; to investigate the Chinese international students learning conceptions[6].

**The conception of learning:** Literature as regards student's conceptions of learning discussed for decades by exploring students learning patterns[14-18, 4, 19]. The expression conception of learning is a way in which students understand what learning means to them[10,6]; "[a] conception of learning captures how a person views learning, that is, what learning means to him/her"[20]. Therefore, a conception of learning is lumping reflection of learning by observing, critical thinking and self-reflecting[21]. The preliminary categories of conceptions of learning to consider the university students, learning as a boost in their knowledge, memorization and reproduction, attainment of practical experience and application, the notion of sense, learning as interpretive skills to understand the reality were identified by Saljo[14]; later Marton *et al*.[2] identified the sixth-factor' change as a person.' Several studies also explored and proposed conceptualizations[15, 16, 22], hence, conceptions of learning predict students learning outcomes and their interaction to learning environment and culture[16].

**Culture and conception of learning:** The triangulation integration of education, learning and culture has witnessed a growing interest in student's conception of learning[5, 23, 4, 19]. What caused the changes in learning conceptions is still a undercover phenomenon for researchers due to distinct teaching and learning practice culture difference across the globe educational system. Moreover, studies of Van Rossum *et al*.[24] and Vermunt and Van Rijswijk[25] suggest that the learning environment might be an essential factor to influence student's conceptions of learning, especially in higher education; contextual factors could stimulate the development of the conception of learning from a "lower" or "a simple" level to a "higher" or "complex" level. Researchers have been conducted to understand better student's cross culture to understand better learning from different cultural backgrounds[23, 4, 10, 26, 6]. However, culture has a vital construction to develop learning conception; above all to consider international students learning conceptions it has significant role; to embrace the new educational experience of studying abroad is not always easy to adopt[4]. The recent empirical study of Srirama *et al*.[26] illustrate that the learning culture, trust and shared vision have a positive influence on individual cognitive learning. Therefore, the varying perceptions of learning resulted from cultural differences[27]. Likewise, this point was evident in a study conducted in Chinese context which attempt to demonstrate the significance of cultural context to student's learning conceptions[10].

**Chinese conceptions of learning:** Studies on Chinese learning conceptions are scant. However, in recent years, the paradoxical findings that most Asian students who were characterized as adopting the rote-learning approach achieved excellent academic results[28] lead to some studies focused on exploring learning conception and approach in "non-Western" contexts[29, 28].

A preliminary study on Chinese conceptions of learning was conducted by Pratt[30]. Through interviewing 57 Chinese adult educators about their conceptions of learning and teaching, four different categories of conceptions of learning have identified: the acquisition of knowledge or skills from others; fulfillment of responsibility to society; a change in the understanding of something external to self and a change in understanding

self. Compared with Marton *et al*.[2] six conceptions of learning, it seems that Chinese learners do not perceive learning as remembering and using information; not view learning as a process and do not have the conception of the development of social competence[31]. However, those four conceptions are a part of the six conceptions of learning described by Marton *et al*.[2] which demonstrates that to some degree, Chinese learner's learning conceptions are similar to the Western students. Moreover, these conceptions are also hierarchical, ranging from the basic idea of gaining information to a higher level of personal change. Furthermore, this study revealed one of the significant differences concerned the approaches to acquire knowledge. Chinese learners in studies have generally believed that knowledge acquisition is external and relies on their teachers, who are regarded as moral character models[30].

Subsequently, instead of collecting data by interview, Wu *et al*.[31] carried a study employing learning-related items to examine Chinese undergraduate students' conceptions of learning. All of these items were organized in a hierarchical structure. The findings of this study demonstrate that the majority of Chinese students perceive learning as seeking knowledge and their attitudes toward learning as the quartet of diligence, endurance of hardship, steadfastness and concentration which all must be performed throughout the lifelong pursuit of knowledge[32]. Wu *et al*.[31] also commented that, "Chinese learners appreciate humility and engaged in learning with full concentration" (p. 131). Furthermore, Yang[33] explained that Chinese learner's conceptions of learning are primarily influenced by traditional Chinese culture which highly valued hard work, effort and endurance.

However, Pratt *et al*.[34] criticize that those learning conceptions are not representative due to the small sample size and interview data collection method. To solve this problem, they collect data from an open-ended survey with 397 undergraduate students and 82 faculty members in six different departments in four universities of Hong Kong. The results were similar to these two studies above which indicated that Chinese respondents conceive learning as an external thing. They tend to depend on their teachers and textbooks highly. Moreover, the findings also showed that Chinese learners perceive learning as sequential progress which develops from memorizing, understanding, applying to questioning, or modifying. This progress implied that only at the last stage of learning, Chinese learners would be critical, different from western learners who question and evaluate throughout their learning process. While since this study was carried in Hong Kong; thus, the findings of this study still cannot represent the mainland Chinese learner's learning conceptions. Therefore, further research into mainland Chinese student's conceptions of learning is needed.

Studies on Chinese conceptions of learning have many similarities to Saljo[14]'s reviews and Marton *et al*.[2] in perceiving learning as knowledge increase, memorization, application and understanding. However, it must be noted that students from China and western countries understand memorization in different ways[3, 34, 19]. As discussed before, in western learner's views, memorization is associated with rote learning which is clearly distinguished from the process of understanding. Moreover, they view memorization and knowledge as separate entities that occur at different times. Instead of seeing and understanding as distinct, most Chinese students and educators considered memorization and understanding interconnected. Furthermore, they believed that understanding could be developed through memorization[17].

In conclusion, previous studies have provided evidence that enhances a better understanding of conceptions of learning and their relationship with learning contexts. However, most of these studies were conducted in western contexts and there is little research on Chinese student's learning conceptions and how their conceptions of learning developed in western universities. Furthermore, much reported research of learning conceptions has been mainly focused on undergraduate students or adult learners in academic contexts and was carried out before 2000[35]. Few recent studies explore the graduate students' learning conceptions and the individual development of their learning conceptions.

Besides, most previous studies describe student's conceptions of learning through interviewing. The data collected from interviewing could only represent a part of Chinese student's learning conceptions. This qualitative method presumes student's conceptions of learning as one conception which is not accurate.

Since, Chinese students constitute the largest group of international students in western universities[36], more studies have been done to explore Western universitie's learning experience. However, no study has specially investigated Chinese postgraduate student's conceptions of learning in UK universities. Therefore, this study explores Chinese postgraduate student's conceptions of learning and their conceptions of learning change since they have studied in the UK universities. The first study examines how Chinese postgraduate student's conceptions of learning development in the UK. This study uses quantitative instruments to elaborate on the complexity of the conceptions of learning.

## MATERIALS AND METHODS

The quantitative, quasi-experimental study design was adopted to obtain the purpose of the study. Hence, the quasi-experiment study's data was collected using the Conceptions of Learning Inventory (COLI) by Purdie and Hattie[17], with a six-point Likert scale survey

administered at the end of the academic semester. The COLI was developed from qualitative study data obtained from Australian and Japanese high school students learning behavior. Further, Coolican[37] refers quasi-experimental to a well-controlled research design that shares many similar characteristics with a true experimental but lacks the two most essential features: random selection of participants and full control over the independent variable. This quasi-experimental research design used the Conceptions of Learning Inventory (COLI)[17] survey to provide insight into studying abroad on the student's conceptions of learning. This research design was chosen because the experimental and control groups were selected through some researcher's criteria other than randomization[38]. It means the researcher is not required to group individuals since these groups come pre-determined. Furthermore, in this study, only the experimental group had the experience of studying at a British university. This study analyzed data from the Conceptions of Learning Inventory (COLI)[17], a six-point Likert scale survey administered to both groups.

We adopted snowball sampling[39] to initiate with my family, friends and previous and current classmates in the UK and China. Snowball sampling is a non-probability sampling technique that selects participants based on the researcher's judgment. A total of 239 Chinese students participated in the study. All participants had completed their undergraduate studies in four Chinese universities. One hundred eleven had only studied in China, currently are second-grade postgraduates, 128 had recently concluded their graduate studies from three United Kingdom universities. All the UK or China university participants were from one of four disciplines: education, engineering, law, or finance. The sample's nature and composition are presented in Table 1. Since, the educational system of postgraduates are different between the UK and China. Usually, there is only one year of schooling in the UK; contrary, the master student's length of education is two or three years (depends on the major)[40]. To established two comparative groups, participants studying in China were selected from second-year graduate students. Hence the motive, why we chose second-year students is that generally, in the second year, they finished all the modules and prepared their dissertation which is similar to their counterparts in the UK.

Table 1: Factor loadings from exploratory analysis of conceptions of learning items for Chinese samples

| | Factor loadings | | | | |
|---|---|---|---|---|---|
| | COLI Exploratory sample (n=331) | | Chinese Exploratory sample (n=239) | | |
| Factor/Item | 1 | 2 | 1 | 2 | Alpha |
| Factor I Gaining Information (INFO) | INFO1 | 0.61 | INFO1 | 0.45 | 0.63 |
| | INFO2 | 0.55 | INFO2 | 0.43 | |
| | INFO3 | 0.61 | INFO-R1 (RUU1) | 0.65 | |
| | INFO4 | 0.62 | INFO-R2 (RUU2) | 0.60 | |
| | INFO5 | 0.58 | INFO-R3 (RUU4) | 0.83 | |
| Factor II Remembering, Using | RUU1 | 0.54 | RUU5 | 0.73 | 0.69 |
| and Understanding (RUU) | RUU2 | 0.62 | RUU6 | 0.50 | |
| | RUU3 | 0.63 | RUU8 | 0.60 | |
| | RUU4 | 0.58 | RUU9 | 0.40 | |
| | RUU5 | 0.68 | PROC2 | 0.40 | |
| | RUU6 | 0.47 | | | |
| | RUU7 | 0.63 | | | |
| | RUU8 | 0.55 | | | |
| | RUU9 | 0.56 | | | |
| Factor III Duty (DUTY) | DUTY1 | 0.38 | DUTY1 | 0.70 | 0.54 |
| | DUTY2 | 0.68 | DUTY3 | 0.63 | |
| | DUTY3 | 0.45 | INFO3 | 0.60 | |
| Factor IV Personal change (PERS) | PERS1 | 0.64 | PERS1 | 0.46 | 0.83 |
| | PERS2 | 0.65 | PERS2 | 0.80 | |
| | PERS3 | 0.75 | PERS3 | 0.64 | |
| | PERS4 | 0.73 | PERS4 | 0.74 | |
| | PERS5 | 0.56 | PERS4 | 0.51 | |
| | PERS6 | 0.70 | PERS5- RUU7 | 0.60 | |
| | PERS7 | 0.61 | | | |
| | PERS8 | 0.68 | | | |
| Factor V Process (PROC) | PROC1 | 0.55 | PROC1 | 0.51 | 0.57 |
| | PROC2 | 0.47 | PERS5 | 0.40 | |
| | PROC3 | 0.73 | INFO4 | 0.52 | |
| Factor VI Social (SOC) | SOC1 | 0.70 | SOC1 | 0.65 | 0.75 |
| | SOC2 | 0.64 | SOC2 | 0.61 | |
| | SOC3 | 0.68 | SOC3 | 0.70 | |
| | SOC4 | 0.76 | SOC4 | 0.55 | |

## RESULTS

To assure our study's trustworthiness, we have analyzed the preliminary data to measure our research instrument's reliability and design. Thus, in this study, internal consistency, the central aspect of consistency, is considered and the method used to estimate the reliability of the COLI in this study was coefficient alpha. According to Purdie and Hattie[17], the Conceptions of Learning Inventory (COLI) has the right internal consistency with a Cronbach alpha coefficient reported of 0.86. In the current study, the estimated Cronbach alpha coefficient was above 0.89 which ascertained our participant's research findings.

**Factor analysis:** Factor loadings indicated differences from the original instruments of the Conception of Learning Inventory[17]. The same number of factors compared with the original tool are identified with a Total Variance Explained of 52.5% but the items within one aspect are not in the same order. Differences are presented in Table 1.

In Factor I (Gaining information), only two items remain of the original structure. Other three factors from Factor II joins this Factor (RUU1, RUU2, RUU4). The internal consistency obtained has an alpha of 0.63. In Factor II (Remembering, using and understanding), four items persist of the original structure but are associated with one item of Factor V (PROC 2). Those items within Factor II obtain an appropriate value of alpha (0.7).

About Factor III (Duty), it remains two original items that associate with a third belonging to Factor I (INFO3) with a low Cronbach value (0.54). Factor IV (Personal change) loses three items than the original scale of eight items and one item from Factor II (RUU 7) joins. Nevertheless, it maintains a strong internal consistency (0.83). Concerning Factor V (Process), two items of the three original items of the Factor remain. In the present case, the internal consistency of alpha is 0.57. In respect to Factor VI (Social competence), the scale presented the same structure as the original and the internal consistency obtained has an alpha value of 0.75.

Further, Table 1 results indicated that six distinct factors were underlying Chinese postgraduate student's responses to the Conceptions of Learning Inventory (COLI) items and that these factors were moderately internally consistent. However, although some items saturate in different factors and not in the originals, the original factor structure proposed by Purdie and Hattie[17] was retained.

Means of Chinese student's conceptions of learning present the means of Chinese postgraduate student's conceptions of learning according to the two different factor-structures (Fig. 1). In Graph 5, since, Factor five does not have prominent factor features, Factor E is named. Nevertheless, for comparison's sake, the other five factors used the original factor structure's name. Compare the two graphs; there are some similarities and differences. Firstly, it is observed from the two graphs that the average scores on each Factor were above 4.4 which shows that most Chinese postgraduate students agree on these conceptions, to some extent. Secondly, the highest score was obtained on the fourth Factor (Learning as personal change) which shows that most Chinese postgraduate students conceive this conception. Thirdly, the average scores on the last four factors are similar, both above 4.8 in graph4 and graph 5. However, the mean scores on Factor I (INFO) and II (RUU) are opposite in those two graphs. In graph 4, the average score on Factor I is above 4.8 while scores on factor II is below 4.5. However, compared to graph 5, the average scores on factors I and II in graph 5 are 4.4 and 4.85 which is the opposite.

**Learning conception difference between Chinese postgraduate students in the UK and Chinese Universities:** To identify a learning conception behavior difference between postgraduate Chinese students in the UK and Chinese universities, we conducted an independents sample T-Test. The result from Table 2 demonstrates the comparison changes in Conceptions of learning between students studying in the UK and China. In the first section of Table 2, the Sig. (p) value of was $p = 0.056$ which $>0.05$, meaning the variances for the two groups (Chinese postgraduate students studying in the UK and China) were not significantly the same. Thus, Table 2 result implies there was not a significant difference of learning conception score across experimental (students studying in the UK) ($M = 0.16$, $SD = 0.21$) and controlled group (students studying in China) ($M = 0.22$, $SD = 0.30$); $t(195) = 1.92$, $p = 0.056$, two-tailed). The mean difference in the means (mean difference = 0.63, 95% CI: - 0.001 to 0.13) was very small (eta squared = 0.0015).

**Identifying factors influencing Chinese students learning conception in a divergent learning environment:** Since, the answers to the added question, "Has this changed, since, you started your master studies", is based on student's memorization and it is difficult for students to identify changes on their own. In case students deny any change or some changes are too trivial to notice, six independent-samples t-tests have been conducted to check any differences between the two groups in terms of the six factors of the COLI ("INFO", "RUU", "DUTY", "PERS", "PROC", "SOC").

According to Table 3, Examining Levene's Test for Equality of Variances for the two groups for Factor 1 "INFO" (learning as gaining information), $F = 0.244$, $p = 0.622$, this is non-significant; therefore, homogeneity of variances is assumed. Compare two means, $t(237) = -8.28$, $p = 0$ (which is above the required cut-off of .05);

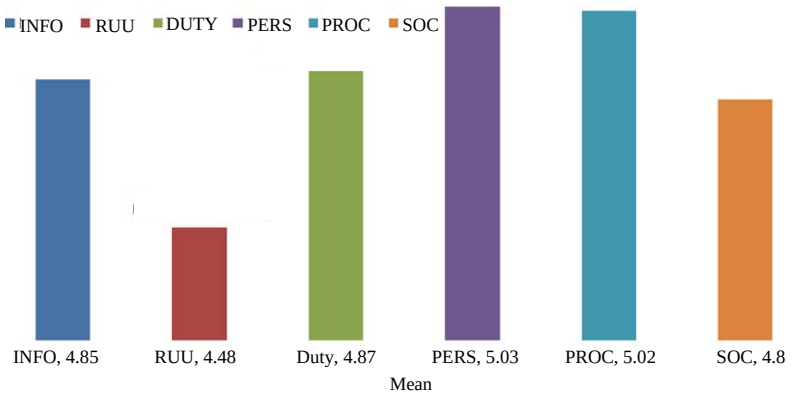


Fig. 1: The mean of Chinese graduate student's Conceptions of learning in terms of six factors; Lickers Scale between 1 = strongly disagree to 6 = strongly agree; INFO = gaining information; RUU = remembering, using and understanding; DUTY = duty; PERC = personal change; PROC= process; SOC= social competence

Table 2: The effect of the learning environment on student learning conception

| Variables | F | df | SE | p | N | M | SD |
|---|---|---|---|---|---|---|---|
| Uk | 11.18 | 194.51 | 0.03 | 0.056 | 128 | 0.16 | 0.021 |
| Chinese | 111 | 0.22 | 0.321 | | | | |

Table 3: Independent-samples t-test for six factors of the conceptions of learning

| Samples | F | df | Mean diff | SE diff | p-values |
|---|---|---|---|---|---|
| INFO | 0.244 | 237 | -0.58674 | 0.07082 | 0 |
| RUU | 0.008 | 237 | -0.23305 | 0.06848 | 0.001 |
| DUTY | 0.258 | 237 | -0.39142 | 0.09155 | 0 |
| PERS | 2.832 | 237 | -0.2733 | 0.07343 | 0 |
| PROC | 3.332 | 237 | -0.12657 | 0.07787 | 0.105 |
| SOC | 2.38 | 237 | -0.16253 | 0.09178 | 0.078 |

this is non-significant. Therefore, there is no significant difference between the Chinese postgraduate students in the UK and China on the mean score of Factor 1 "INFO". Examining Levene's Test for Equality of Variances for Chinese students who pursue their postgraduate studies in the UK and China for Factor 2 "RUU" (learning as remembering, using and understanding), F = 0.008, p = 0.929, this is non-significant; therefore, homogeneity of variances is assumed. Compare two means, t(237) =-3.403, p = 0.001 (which is <0.05), this is significant. Therefore there is a significant difference between the two groups of students on the mean score of Factor 2 "RUU".

Evaluating Levene's Test for Equality of Variances for the UK and Chinese students for Factor 3 "DUTY", F = 0.258, p = 0.612 non-significant therefore, homogeneity of variances is assumed. Compare two means, t(237) = -4.275, p = 0; this is non-significant. Therefore there is no significant difference between the UK and Chinese students on the mean score of Factor 3 "DUTY". Likewise, for Equality of Variances for Factor 4 "PERS", F = 2.832, p = 0.094, this is non-significant, therefore, homogeneity of variances is assumed. Compare two means, t(237) = -3.722, p = 0; this is non-significant. Therefore, there is no significant difference between the two groups on the mean score of Factor 4 "PERS".

Regarding Chinese students pursuing master studies in the UK and China for Factor 5 "PROC", F = 3.332, p = 0.069, the T-test stated a significant difference between these two distinct learning environment for postgraduate students. Therefore, the heterogeneity of variances is assumed. Compare two means, t(237) =-1.625, p = 0.105; this is non-significant. Therefore, there is no significant difference between the two groups on the mean score of Factor 5 "PROC". Moreover, Table 3 results stated the Chinese students in the UK and China for Factor 6 "SOC" (learning as the development of social competence) and the result illuminates that F = 2.38, p = 0.124 which confirm that it is significant therefore heterogeneity of variances are assumed. Compare two means, t(237) = -1.771, p = 0.078; this is non-significant. Therefore, there is no significant difference between them on the mean score of factor 6 "SOC".

## DISCUSSION

This paper's main focus was to better understand the Chinese postgraduate students' conceptions of learning by distinguishing the learning conceptions between Chinese postgraduate students who are currently studying in the UK and who are studying in China. Consequently, literature assumed that Chinese learners regard remembering or memorization as the same as understanding[10, 6]. As for most Chinese students, they gain information utilizing memorization[2]. Besides, Marton *et al.*[2] also find that some Chinese learners believe that understanding is the sum of gaining information and the process of remembering was in line with that[17, 6]. Chinese postgraduate students have more educational experience than high school students; thus,

most of them conceive learning as understanding and personal change which are seen as higher-level conceptions, rather than merely gaining information.

Besides, according to Vermunt and Van Rijswijk[25], different culture engenders different thoughts and ways of learning. Since, participants of those two studies are from China and Australia; therefore, it is expected that their learning conceptions are different[27]. Thirdly, although, the same questionnaire (the COLI) is used for both studies, this study used the Chinese version which translators translated. Since, there are some differences between Chinese and English; thus, participants in those two studies have a different understanding of the questionnaire.

However, it is difficult to choose from the two-factor structures since they have advantages and disadvantages. The original six factor-structures from the study of Purdie and Hattie[17] have been used and validated in many studies, demonstrating their high reliability.

However, although, the original structure is more reliable, the new factor-structure is generated from this study's empirical data which is more representative. For example, Factor 2, "Learning as remembering, using and understanding", loses four items than the original scale of 9 items. If the original factor-structure were used for further analysis, the reliability of the results would be affected. However, the new structure's big challenge is that items loaded on factors are messy and they do not have a common factor feature. For instance, Factor five is composed of items from original factors one and four which do not have the same theme, thus, they cannot regard as one Factor. Besides, few items loaded on factor 7 and 8, among which the value of items loads not strong (below. 3) or even harmful.

Chinese postgraduate student's conceptions of learning are partly in line with previous results, as similarities between previous studies are found[29, 28]. Based on the COLI's six factors, the means of the COLI subscales were calculated to describe Chinese postgraduate student's conceptions of learning. However, the present study shows that Chinese postgraduate students obtain a lower score on the second category learning as remembering, using and understanding[29, 21]. According to Marton *et al*.[29], Asian cultures, especially Chinese culture, represents learning as a combination of memorizing and understanding[21]. Besides, some Chinese teacher educators view remembering or memorization and understanding as an inseparable process which occurs at some points in time. Items belong to this category like "I have learned something when I can remember it later" (RUU 4); "I should be able to remember what I have learned at a later date" (RUU3), clearly reveal the relationship between memorization and understanding.

Regardless of the influence of cultural and learning context, several reasons could explain why this study's results show no changes in student's learning conception. Firstly, according to the findings of Marton *et al*.[2]'s and Marambe *et al*.[4]'s study, student's learning conceptions are influenced by their previous educational experiences and develop with the teaching they receive in a higher education context[15, 22]. In this study, even though one group of students is now studying in the UK, they used to study in China for more than 20 years and finished their undergraduate studies in China. Thus, their learning conceptions have formed and are profoundly influenced by Chinese culture and learning environment[10]. Furthermore, due to the one-year graduate system in Britain, it is too short to change Chinese student's learning conceptions which have been formed before they come.

Data presented in the study, revealed that there is no difference in changes between the two groups. According to the findings, students studying in the UK did not change their learning conceptions, since, they studied abroad. Similarly, the average score on the change items of Chinese postgraduate students who do not have the experience of studying abroad is 0.22 which shows no variations in their learning conceptions. Therefore, based on students' responses to "change questions", no change has been found in this study; thus, there is no difference in the shift was contrary to Marton *et al*.[2].

Although, students find no change in their learning conceptions, students likely deny any changes. Thus, an independent-samples t-test is used to see the difference in changes between the two groups. As shown in the study, there is no significant difference identified among the six factors, except Factor 2 RUU (Learning as remembering, using and understanding). Results showed a significant difference between the students studying in the UK and China on factor 2.

Most Chinese postgraduate students conceive learning as a duty, personal change, process and social competence development which are viewed as the higher-level conceptions[30]. Regarding the influence of studying abroad on student's learning conceptions, according to student's responses, this study's findings show that the experience of studying abroad does not change their learning conceptions. Therefore, there is no difference in changes between students who study abroad and those who do not was contrary to Vermunt and Van Rijswijk[25] and Srirama *et al*.[26]. However, through comparing the means on the Conceptions of Learning Inventory between the two groups, there is a significant difference in factor 2 learning as remembering, using and understanding.

## CONCLUSION

This study explored Chinese postgraduate student's conceptions of learning and their relationship with the learning environment based on empirical and theoretical

studies. Chinese postgraduate students who have studied in China for >20 years and their conceptions of learning have been influenced by the Chinese culture and learning environment. When those students move to the western cultural environment, their fixed learning conceptions are affected. Previous research on conceptions of learning, learning context and the inter-relationship between these two factors have been mainly conducted in western society. This study focused on students from a Chinese society doing graduate study in UK universities. The primary purpose of this study was to describe Chinese postgraduate student's conceptions of learning and explore how their learning conceptions change, since, they have studied abroad.

The data suggest that most Chinese postgraduate students, both study in the UK and China, conceive learning as personal change, duty, process and social competence which are more complicated conceptions at the higher-level hierarchy. Although previous studies demonstrate that students' learning conceptions are influenced by the cultural and learning context[14], the results of this study do not his study's outcome sorting to student's reflection; they deny any changes during the one-year overseas study. The findings imply no significant difference in learning conceptions between students' lessons in the UK and China. What follows discusses the conclusion and implication of the study by following each research question.

Chinese students who pursue their postgraduate studies in the UK do not change their learning conceptions. Similarly, students who study in China for a master's degree do not change their learning conceptions. Therefore, no significant difference between their changes was contrary to Abhayawansa and Fonseca[23].

However, there is a risk that students deny any changes or some changes are too trivial to identify. To compare the difference of learning conceptions between students studying in the UK and China, based on the six factors of the COLI, independent-samples t-tests were used to compare the differences of their learning conceptions. According to the results, the differences in learning conceptions between the two groups were only found in the second factor learning as remembering, using and understanding. There is no significant difference in the other five factors. Students changed their conceptions on learning as remembering, using and understanding different interpretations of the relationship between memorization and understanding. The study of Marton *et al*.[2] reports that Chinese learners perceive the process of memorization and understanding as to the same thing which takes place at the same time. In contrast, Western learners equal are remembering as rote learning which is different from understanding. Thus, studying in the West's environment, student's learning conceptions are influenced, emphasizing memorization as a separate entity.

This study provides essential information for British universities to support Chinese students pursuing their postgraduate studies in the UK. The findings of this study have implications for educators, professors and administrators in British universities. For instance, this study briefly discussed Chinese postgraduate student's conception of learning which helps British universities better understand Chinese students.

Fortunately, it is the first study investigating Chinese graduate student's conceptions of learning by collecting quantitative data. The first study investigates the influence of graduate study experiences in UK universities on Chinese student's learning conceptions by using a quantitative quasi-experimental method to explore the effect of studying abroad on student's learning conceptions.

**Funding:** A Project Supported by the Center for Early Childhood Education Research, Sichuan. The project name is Research on Kindergarten Art Field Curriculum under the Vision of Life Aesthetics Project No. is CECER-2020-B05.

## ACKNOWLEDGMENT

We want to thank our participants for participating in the study to make it happen by dedicating themselves to this study.

## REFERENCES

01. IRAU., 2007. International students in higher education: Comparison of central English speaking destination countries. International Research and Analysis Unit, USA.
02. Marton, F., G. Dall Alba and E. Beaty, 1993. Conceptions of learning. Int. J. Educ. Res., 19: 277-300.
03. Biggs, J., 1996. Western Misperceptions of the Confucian-Heritage Learning Culture. In: The Chinese Learner: Cultural, Psychological and Contextual Influences, Watkins, D. and J.B. Biggs (Eds.)., The University of Hong Kong, Hong Kong, pp: 45-67.
04. Marambe, K.N., J.D. Vermunt and H.P. Boshuizen, 2012. A cross-cultural comparison of student learning patterns in higher education. Higher Educ., 64: 299-316.
05. Hofstede, G., 2001. Culture's Consequences: Comparing Values, Behaviors, Institutions and Organizations Across Nations. 2nd Edn., Sage Publications, Inc., Thousand Oakas, CA., ISBN-13: 978-0803973244, Pages: 616.

06. Zhao, X. and Y. Hu, 2020. A phenomenographic study of Chinese undergraduates conceptions of learning in transnational programs. SAGE Open, Vol. 10, No. 3. 10.1177/2158244020957034
07. Carson, J.G., 1992. Becoming biliterate: First language influences. J. Second Lang. Writing, 1: 37-60.
08. Biemans, H. and M. Van Mil, 2008. Learning styles of Chinese and Dutch students compared within the context of Dutch higher education in life sciences. J. Agric. Educ. Extension, 14: 265-278.
09. Watkins, D.A. and J.B. Biggs, 2001. The Paradox of the Chinese Learner and Beyond. In: Teaching the Chinese Learner: Psychological and Pedagogical Perspectives, Watkins, D.A. and J.B. Biggs (Eds.)., Comparative Education Research Center, Hong Kong, pp: 3-26.
10. Zhao, Z. and G.P. Thomas, 2016. Mainland Chinese students conceptions of learning science: A phenomenographic study in Hebei and Shandong Provinces. Int. J. Educ. Res., 75: 76-87.
11. Biggs, J., 1998. Learning from the Confucian heritage: So size doesn't matter?. Int. J. Educ. Res., 29: 723-738.
12. Xu, J., 2002. Chinese students adaptation to learning in an American university: A multiple case study. Ph.D. Thesis, The University of Nebraska-Lincoln, Lincoln, Nebraska.
13. Ballard, B. and J. Clanchy, 1997. Teaching International Students: A Brief Guide for Lecturers and Supervisors. IDP Education, Canberra, Australia,.
14. Saljo, R., 1979. Learning in the learner's perspective II: Differences in awareness. Institute of Education, University of Goteborg, Gothenburg, Sweden.
15. Eklund-Myrskog, G., 1998. Students conceptions of learning in different educational contexts. Higher Educ., 35: 299-316.
16. Marshall, D., M. Summer and B. Woolnough, 1999. Students conceptions of learning in an engineering context. Higher Educ., 38: 291-309.
17. Purdie, N.M. and J. Hattie, 2002. Assessing students conceptions of learning. Aust. J. Educ. Dev. Psychol., 2: 17-32.
18. Vermunt, J.D. and Y.J. Vermetten, 2004. Patterns in student learning: relationships between learning strategies, conceptions of learning and learning orientations. Educ. Psychol. Rev., 16: 359-384.
19. Ashong, C. and N. Commander, 2017. Brazilian and Nigerian international students conceptions of learning in higher education. J. Int. Stud., 7: 163-187.
20. Byrne, M. and B. Flood, 2004. Exploring the conceptions of learning of accounting students. Accounting Educ., 13: 25-37.
21. Marton, F. and S. Booth, 1997. Learning and Awareness. Lawrence Erlbaum, Mahwah, New Jersey, USA.,.
22. Virtanen, V. and S. Lindblom-Ylanne, 2010. University students and teachers conceptions of teaching and learning in the biosciences. Instructional Sci., 38: 355-370.
23. Abhayawansa, S. and L. Fonseca, 2010. Conceptions of learning and approaches to learning-a phenomenographic study of a group of overseas accounting students from Sri Lanka. Accounting Educ. Int. J., 19: 527-550.
24. Van Rossum, E.J., R. Deijkers and R. Hamer, 1985. Students learning conceptions and their interpretation of significant educational concepts. Higher Educ., 14: 617-641.
25. Vermunt, J.D. and F.A. Van Rijswijk, 1988. Analysis and development of students skill in selfregulated learning. Higher Educ., 17: 647-682.
26. Srirama, M.V., P.P. Iyer and H. Reddy, 2020. Dimensions of social capital and learning culture: A case of an IT organization. Learn. Organ., 27: 337-349.
27. Woodrow, D., 2001. Cultural determination of curricula, theories and practices. Pedagogy Culture Soc., 9: 5-27.
28. Cliff, A.F., 1998. Teacher-learners conceptions of learning: Evidence of a communalist conception amongst postgraduate learners?. Higher Educ., 35: 205-220.
29. Marton, F., D. Watkins and C. Tang, 1997. Discontinuities and continuities in the experience of learning: An interview study of high-school students in Hong Kong. Learn. Instruction, 7: 21-48.
30. Pratt, D.D., 1992. Conceptions of teaching. Adult Learn. Q., 42: 203-220.
31. Wu, J., K. Ota, M. Dong and C. Li, 2001. Chinese conceptualization of learning. Ethos, 29: 111-137.
32. Hou, D., 2009. Students conceptions of learning and their correspondence to learning in western universities: A study of Chinese graduate students. Master Thesis, McGill University, Montreal, Canada.
33. Yang, H.Y., 1986. A Study on the Educational Thoughts of Confucius. In: Chinese Educational Sciences, Central Institute of Educational Research (Ed.)., Educational Sciences Publishing House, Beijing, China, pp: 192-201.
34. Pratt, D.D., M. Kelly and W.S. Wong, 1999. Chinese conceptions of effective teaching in Hong Kong: Towards culturally sensitive evaluation of teaching. Int. J. Lifelong Educ., 18: 241-258.
35. Asikainen, H., V. Virtanen, A. Parpala and S. Lindblom-Ylanne, 2013. Understanding the variation in bioscience students conceptions of learning in the 21st century. Int. J. Educ. Res., 62: 36-42.
36. British Council, 2008. China market introduction. London, England.

37. Coolican, H., 2009. Research Methods and Statistics in Psychology. Routledge, England, UK.,.
38. Creswell, J.W., 2012. Qualitative Inquiry and Research Design: Choosing among Five Approaches. 3rd Edn., Sage Publications Inc., California, USA., ISBN-13: 978-1412995306, Pages: 472.
39. Patton, M.Q., 1990. Qualitative Evaluation and Research Methods. 2nd Edn., Sage Publications, Thousand Oaks, CA.
40. Tao, J.S. and S.J. Zhang, 2011. The difference in graduate educational modulation between UK and China. J. Electr. Electron. Educ., Vol. 6,