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# A COMPARISON OF AMERICAN-BORN CHINESE AND TAIWANESE COLLEGE STUDENTS IN APPROACHES TO STUDYING

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***ABSTRACT***

**Purpose:**The purpose of this study was designed to bracket both population's culturally-related study skills in an attempt to know their similarities and dissimilarities.

**Methodology:**The current study used a quasi-experimental quantitative researchto examine 62 American-born Chinese and 79 Taiwanese college students by using the Approaches to Studying Inventory to compare their learning study approaches.

**Results:**Data analysis revealed three significant results: (a) American-born Chinesestudentsexpressed more interesting in ideas in deep approach and syllabus-boundness in surface approach than Taiwanese students. (b) Taiwanese students showed more in seeking meaning in deep approaches and time management in strategic approach than American-born Chinese students (c) American-born Chinese students displayed grater extrinsic motivation than their Taiwanese counterparts whereas Taiwanese students were more intrinsically motivated academically than American-Born Chinese students.

**Implications:**Results suggest that American-born Chinese students' learning approaches were influenced by their learning and social contexts. Further studies could be conducted to identify the learning approaches in various generations of American-born Chinese to differentiate learning and social context influences.

***Keywords****: approaches to learning, American-born Chinese college students, Taiwanese college students, social context, deep, surface learning, ASI*

## INTRODUCTION

Chinese students' performance in the United States has long been drawing attention (Taylor et al., 2012; Pearce & Lin, 2007). They are often viewed by Western academia as modest and diligent (Park, 2000).However, their learning styles are often labeled somewhat negatively such asrote, silent, and passive (Dahlin & Watkins, 2000; Sit, 2013). The learning styles are often viewed as surface learning styles, producing a less effective learning outcome (Biggs, 2003, Au & Entwistle, 2001).However, students' learning styles vary because of cultural influences and social effects (Joy& Kolb, 2007;Park, 2000).In addition,influenced by ethnic backgrounds, the learning and culture of living contexts in which people "differ in the values, norms, and behaviors that they accept and propagate"also affect individuals (Joy& Kolb, 2007, p.8). Therefore, individual learning styles are influenced byboth cultural socialization (Hofstede, 1997)and educational context (Richardson, 2010).

American-Born Chinese (ABC) and Taiwanese college students grew up with different social and learning contexts, butcarry the same CHC background (Wang & Niu, 2013).The purpose of this study was to investigate the differences in approaches to studying between ABC and Taiwanese college students.It intended to seek a more comprehensive grasp of ABCs' learning approaches and study skills that may lead to their academic attainment. The findings and insights from this research may offer a better understanding of ABCs' learning approaches and study skills, thus, clearing up some misunderstandings about their learning styles. The research question: Is there a statistically significant difference between ABC and Taiwanese college students in their learning approaches?

## LITERATURE REVIEW

Confucian Asian students, including those from China, Hong Kong, Japan, Singapore, South Korea, and Taiwan (House et al. 2004), typically have a positive attitude toward education, keep up their motivation, believe in the value of education, and are willing to spend more time studying. After comparing students in Confucius Heritage Culture (CHC) countries, such as Hong Kong, Taiwan, China, Malaysia, and Singapore with Western students in various levels, the researchers concluded that CHC has contributed to their academic attainment (Au & Antwistle, 2001; Pearce & Lin, 2007; Smith, 2001). Asian students embody the educational concepts of Confucian cultural values because they place a premium on ambition, persistence, and deferred gratification, and exhibit a strong desire for intergenerational social mobility (Pearce & Lin, 2007).

Studies showed that Asian peoples' study ethic is rooted in Confucianism (Chen, 2014; Pearce & Lin, 2007). Chinese

 

students, who are viewed as CHC learners, are portrayed as (a) passive, (b) unwilling to ask questions, and (c) reluctant to participate in classroom activities, such as speaking up or to giving responses in class. They avoid asking questions, are over-dependent on the teacher, and simplymemorize knowledge from textbooks or class materials rather than trying to gain a true understanding of content delivered by teachers (Tran, 2013). Their learning style is sometimes criticized by scholars as surface learning (Subramaniam, 2008). However, other researchers have shown that CHC students have "a stronger preference for high-level, meaning-based, learning strategies, and avoidance of rote learning, than that of Western students" (Biggs, 1996a, p.52). They also have higher deep and strategic learning style scores than their Western counterparts do (Au &Entwistle, 2001; Biggs, 2003).

As Joy and Kolb(2007) observed, "Individuals born and currently living in different cultures vary in their approaches to learning" (p. 1). Student approaches to studying are influenced by learning context and content. Personal factors, such as personality, ethnicity, and cultural background, interact with a learning environment, regarding student factors, teaching context, on-task approaches to learning, and learning outcomes (Biggs et al., 2001; Joy & Kolb, 2007). These mutual interactions form a dynamic system thathas an effect on individuals' studying approaches and learning styles.

The current study assumed that the core layer comprised of ABCs' personal factors includes demographic characteristics and CHC learning style, along with various elements of the learning context such as family/ethnic community influences and the Western learning environment. The interaction of these core components yields the ABC students' particularProcess-Oriented Approach (POA) to learning (Figure 1).

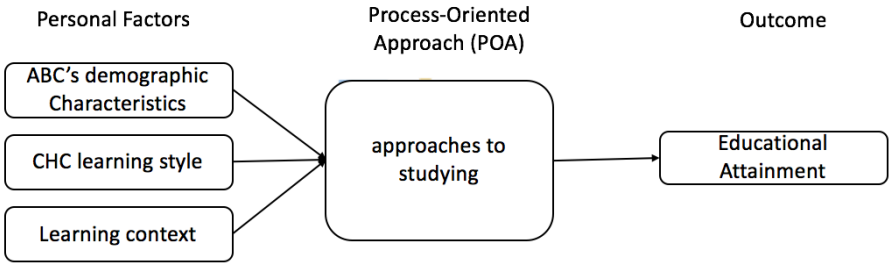


**Figure 1.The conception map of ABC learningapproaches.**

**Personal factor**

Demographic characteristics include a person's ethnic and family backgrounds, personal interests, and educational experiences, all of which are relatively stable. ABCs often live in families with their parent's culture. Huang and Ying (1989)indicated,"Confucian traditions, passed from one generation to the next, thus becoming increasingly diluted and 'westernized,' still impose an Eastern philosophy of order in the family" (p.31).At home, ABCs are influenced by their parent's values, beliefs, and behavior patterns, which become part of their own natural personal values, beliefs, and behavior patterns.CHC student's study ethic is rooted in the tenets of Confucianism (Chen, 2014; Pearce & Lin, 2007), which may affecttheir learning styles.Learning context is "the set of circumstances that are relevant for the learner to build knowledge when referring to content" (Figueiredo & Afonso, 2006, p. 19). Studies showed that learning context, including the demands of particular course units (Eley, 1992), the quality of teaching (Vermetten et al., 1999),and the nature and demands of assessment (Segers et al., 2006)includesfactors that influence students' approaches to studying.Unlike their foreign-educated immigrant parents, ABC college students grew up in the United States, attending the same schools as their American counterparts. ABCs mostly join the mainstream society that shares "interpretations and understandings of events through socializing members into common patterns of perception, thought and feeling" (McGrath & Tobia, 2008, p. 43) with their American counterparts.

**Approaches to Studying in Chinese Students**

Approaches to studying is "how students think about learning and carry out their studying" (Entwistle, 2000, p. 1) in various learning contexts based on individual experiences. Itassumes that learners' beliefs and their strategies are influenced by the ways individuals interact with different learning environments, specific learning periods, and the demands of particular learning tasks (Richardson, 2010). It is "a context- and content-specific way of carrying out academic tasks" (Entwistle & Peterson, 2004, p. 537).Students choose their approaches to studying depending on the content, the context, and the demands of particular learning tasks (Sun & Richardson, 2011). Learning outcome refers the quality of performance (Biggs, 2003). Student's learning quality is determined by their approaches to studying. The surface approach leads to poor quality learning outcomes whereas the deep approach leads to better quality learning outcomes (Ramsden, 2003).

Researchers have sought explanations for the high educational achievement of Chinese Americans (Biggs et al., 2001; Joy & Kolb, 2007). These researchers were more focused on Chinese immigrant parents' educational aspirations imparted to their children and particular strategies used to foster their children's education.They also explored how social class influences Chinese immigrant parents' expectations, strategies, and investment in their children's education(Louie, 2001).Other studies compare the studying and learning approaches of Chinese college students with the studying and learning approaches of American or other countries' students (Au & Entwistle, 2001; Sit, 2013; Sun & Richardson, 2011), but rarely do they compare the same ethnic populations in different countries.

Smith (2001) compared Malaysian Chinese, Singaporean, and Hong Kong college students studying in Australia by using the Approaches to Studying Inventory (ASI;Entwistle & Ramsden, 1983) and found that even variousChinese subgroups were significantly different in their learning approaches because of the subcultural and learning context differences. The results showed that the demanding of assessments affected students' approaches to studying but did not affect their study strategies and time management. Sun and Richardson (2011) compared Chinese and British postgraduate students at six British business schools by using the Course Experience Questionnaire (CEQ) and Revised Approaches to Studying Inventory (RASI). The results showed, within the same educational context, Chinese and British students had no significant differences in their scores on the CEQ. However, British students had higher scores on deep and strategic approaches than Chinese students did.

Contradictory to Smith's (2001) findings, Sun and Richardson found little variation across students fromdifferent ethnic groups in student's learning perceptions and approaches to studying within the United Kingdom. Participants' learning contexts might cause the discrepancy between the two results. Participants of Sun and Richardson's study were second-year undergraduate students who studied in the United Kingdom, whereas participants of Smith's study were college students from three countries.The above studies showed distinct cultural differences and learning approaches on different groups of students. However, these results need to be replicated with a broader range of comparison groups. Moreover, there appears to be no published evidence on the same ethnic group of students who live in the different countries regarding their self-reported approaches to studying.

## METHODOLOGY

### Instrumentations

*Approaches to Studying Inventory (ASI).*A 52-statement survey, in which students respond to a five-point Likert-type scale (5 = Agree, 4 = Agree somewhat, 3 = Unsure, 2 = Disagree somewhat, 1 = Disagree). These items are designed to identify "the tendencies of students to adopt deep, surface, and strategic approaches to learning and studying" (Entwistle et al., 2013, p. 3). Each approach consists of four or five subscales, total 13 subscales; and each subscale comprises four items.

Table 1. Approaches to Studying and Subscales

| Approach | Subscales | Code | Item No. |
|---|---|---|---|
| Deep | Seeking Meaning | SM | 4, 17, 30, 43 |
| | Relating Idea | RI | 11, 21, 33, 46 |
| | Use of Evidence | UE | 9, 23, 36, 49 |
| | Interest in Idea (motivational aspect) | II | 13, 26, 39, 52 |
| | Monitoring Effectiveness | MF | 7, 20, 34, 47 |
| Strategic | Organized Study | OS | 1, 14, 27, 40 |
| | Time Management | TM | 5, 18, 31, 44 |
| | Achieving | A | 10, 24, 37, 50 |
| | Alertness to Assessment Demands | AD | 2, 15, 28, 41 |
| Surface | Lack of Purpose | LP | 3, 16, 29, 42 |
| | Unrelated Memorizing (motivational aspect) | UM | 6, 19, 32, 45 |
| | Syllabus Boundness | SB | 12, 25, 38, 51 |
| | Fear of Failure | FF | 8, 22, 35, 48 |

*Permission to Use the ASI Inventory.*Entwistle et al. (2013) published the newest ASI and stated, "Either version of each inventory can be used freely with simply an acknowledgment, but the authors cannot enter into correspondence about the methods of analysis or the interpretation of findings" (p. 1). Thus, there is no need to ask the authors' permission to use the ASI with the American and British English versions' modifications.

*The ASI Modifications***.** The ASI was written in British English, in which some words and spellings "might be unfamiliar or misleading to American students" (Speth, Namuth, & Lee, 2003, p. 112). The current study changed the word "memorising" to "memorizing," and "organise" to "organize." Other words such as "tutor" was changed to "instructor" and "marks" to "grades" to avoid confusion for American students as Speth, Namuth, and Lee (2003) suggested.

*Chinese Mandarin Version Translation.* A Chinese Mandarin version of the ASI was used with the Taiwanese college students. In the first step of the adaptation process, three Chinese-English experts translated the English version of the demographic section and the ASI surveys into Chinese Mandarin. An expert who is highly fluent in both Chinese and English translated the Chinese Mandarin version back into English. Then an expert native-English speaker, who holds a master's degree in instructional technology, compared the original and translated versions to verify whether they had the same meanings in each question. Based on the suggestions, three Chinese-English experts revised the questions in the Chinese Mandarin version to ensure compatibility.

**Participants**

The current study involved two groups of participants: 73 ABC college students in the United States and 83 Taiwanese college students in Taiwan, a total of 156 participants.After eliminating participants who failed to report items, the data from 62 ABC (14 males, 47 females), and 79 Taiwanese students (22 males, 56 females, and 1 unknown) were used in the analysis, a total of 141 valid cases. ABC students were recruited from a central California university. Taiwanese college students were recruited from a southern Taiwan university. A class of 36 third-year English major students in the English Department in Taiwan participated in the pilot study to investigate the compatibility of the English and Chinese Mandarin versions of the ASI. Six English surveys and five Chinese surveys were excluded because of missing data.The majority of the age range was from 18 to 23. For the U.S. participants, the majority of family of origin was from China ($N$ = 42, 87.5%), and they were of the second generation ($N$ = 59, 95.2%).

**Research Design and Procedures.**
A quasi-experimental quantitative research design was used to answer the research questions. The English version, including informed consent form, the demographic survey, and the ASI were posted on Google Forms and administered online for the U.S. college students. All responses were automatically recorded and generated on a spreadsheet in the researcher's Google account.For compatibility data collection, the English version of the ASI was administered first, and the Chinese version of the ASI was administered two weeks later. During the same time, the survey of the Chinese Mandarin version was printed and administered as a paper and pencil survey for the Taiwanese college students.

**DISCUSSION/ ANALYSIS**

**Compatibility between the English and Chinese Versions of the ASI**
Table 2 showed results ofthe Cronbach's alpha coefficient. The English version was .819 and the Chinese version .921. The Cronbach's alpha coefficients for the two versions can be considered as evidence of high internal consistency.

**Table 2. Reliability for the English and Chinese Mandarin Versions of the ASI**

| Versions | Cronbach's Alpha | N of Items |
|---|---|---|
| English | 0.819 | 66 |
| Chinese | 0.921 | 66 |

Table 3 showed comparison between two groups on a scale-by-scale basis for each subscale of the ASI.

**Table 3. Descriptive Statistics for ASI Approaches and subscales**

| Approach | Subscales | US ($N$ = 62) | | | Taiwanese ($N$ = 79) | | |
|---|---|---|---|---|---|---|---|
| | | *M* | *SD* | *SEM* | *M* | *SD* | *SEM* |
| Deep | | 56.45 | 9.53 | 1.21 | 55.34 | 7.74 | 0.87 |
| | Seeking Meaning | 13.27 | 2.88 | 0.37 | 14.42 | 2.25 | 0.25 |
| | Relating Ideas | 14.19 | 2.80 | 0.36 | 13.87 | 2.24 | 0.25 |
| | Use of Evidence | 14.13 | 2.78 | 0.35 | 13.48 | 2.51 | 0.28 |
| | Interest in Ideas | 14.85 | 3.00 | 0.38 | 13.57 | 2.62 | 0.29 |
| Strategic | | 64.81 | 12.79 | 1.62 | 66.09 | 10.41 | 1.17 |
| | Organized Studying | 12.50 | 3.30 | 0.42 | 13.08 | 2.70 | 0.30 |
| | Time Management | 11.29 | 3.76 | 0.47 | 13.19 | 2.56 | 0.29 |
| | Alertness to Assessment | 14.13 | 3.38 | 0.43 | 13.19 | 2.56 | 0.29 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Demands | | | | | | |
| | Achieving | 13.15 | 2.79 | 0.35 | 13.77 | 2.14 | 0.24 |
| | Monitoring Effectiveness | 13.74 | 2.69 | 0.34 | 13.57 | 2.34 | 0.26 |
| Surface | | 53.61 | 10.52 | 1.34 | 52.42 | 7.85 | 0.88 |
| | Lack of Purpose | 12.53 | 3.70 | 0.47 | 13.19 | 2.29 | 0.29 |
| | Unrelated Memorizing | 12.56 | 3.17 | 0.40 | 12.61 | 2.63 | 0.30 |
| | Syllabus-Boundness | 14.24 | 3.20 | 0.41 | 13.23 | 2.06 | 0.23 |
| | Fear of Failure | 14.27 | 3.93 | 0.50 | 13.39 | 2.82 | 0.32 |

The possible range of scores of each subscale of the ASI is from 4 to 20 with a midpoint of 12.The independent sample *t*-testswere computed for each scale of the ASI, with the country of residence being the independent variable and learning approaches being dependent variables. An alpha level of 0.05 had been used to establish significance. Independent sample *t*-tests were performed on the two groups of data. Table 4 showed the results of the comparison.

**Table 4. T-Tests for the Approaches to Studying, Subscales, and Significant Items**

| Approach | Subscales and significant items | Levene's Test for Equality of Variance | | t-test for Equality of Mean | | | |
|---|---|---|---|---|---|---|---|
| | | F | Sig. | T | DF | Sig. (2 tailed) | Mean Difference |
| Deep | | 5.00 | 0.03[R] | 0.74 | 116 | 0.458 | 1.11 |
| | Seeking Meaning* | 5.34 | 0.22 [R] | -2.57 | 113 | 0.011 | 1.14 |
| | Item 17* | 2.52 | 0.115 | -2.44 | 139 | 0.016 | -0.42 |
| | Relating Ideas | 2.02 | 0.16 | 0.75 | 139 | 0.453 | 0.32 |
| | Use of Evidence | 2.73 | 0.10 | 1.45 | 139 | 0.149 | 0.65 |
| | Item 49* | 0.83 | 0.363 | 2.75 | 139 | 0.007 | 0.42 |
| | Interest in Ideas* | 3.59 | 0.60 | 2.71 | 139 | 0.007 | 1.29 |
| | Item 13* | 1.95 | 0.165 | 2.92 | 139 | 0.004 | 0.49 |
| | Item 39* | 0.92 | 0.339 | 2.74 | 139 | 0.007 | 0.42 |
| Strategic | | 2.29 | 0.13 | -0.66 | 139 | 0.513 | −1.28 |
| | Organized Studying | 3.14 | 0.08 | -1.14 | 139 | 0.256 | -0.58 |
| | Item 01* | 4.85 | 0.029 | −2.86 | 124 | 0.005 | −0.47 |
| | Time Management* | 6.58 | 0.01 [R] | -2.09 | 108 | 0.039 | -1.19 |
| | Item 18* | 7.30 | 0.008 | −3.90 | 109 | 0.000 | −0.71 |
| | Alertness to Assessment Demands | 3.39 | 0.07 | 1.88 | 139 | 0.062 | 0.94 |
| | Item 15* | 5.71 | 0.018 | 2.88 | 113 | 0.005 | 0.46 |
| | Achieving | 3.72 | 0.06 | -1.51 | 139 | 0.133 | -0.63 |
| | Item 10* | 3.09 | 0.081 | 2.44 | 139 | 0.016 | 0.35 |
| | Item 50* | 4.54 | 0.035 | −4.43 | 112 | 0.000 | −0.84 |
| | Monitoring Effectiveness | 1.88 | 0.17 | 0.41 | 139 | 0.685 | 0.17 |
| | Item 20* | 0.44 | 0.508 | −2.32 | 139 | 0.022 | −0.38 |
| | Item 47* | .51 | 0.476 | 2.20 | 139 | 0.030 | 0.34 |
| Surface | | 3.45 | 0.07 | 0.77 | 139 | 0.441 | 1.20 |
| | Lack of Purpose | 18.63 | 0.00 [R] | -1.23 | 96 | 0.222 | -0.66 |
| | Item 16* | 3.11 | 0.080 | −2.59 | 139 | 0.011 | −0.46 |
| | Unrelated Memorizing | 0.90 | 0.34 | -0.08 | 139 | 0.930 | -0.04 |
| | Item 19* | 0.07 | 0.800 | −2.60 | 139 | 0.010 | −0.47 |
| | Fear of Failure | 7.321 | .008 | 1.491 | 107 | 0.139 | 0.88 |
| | Item 08* | 1.38 | 0.242 | 3.85 | 139 | 0.000 | 0.66 |
| | Syllabus-Boundness* | 11.49 | 0.00 [R] | 2.17 | 99 | 0.033 | 1.01 |
| | Item 38* | 1.77 | 0.185 | 3.11 | 139 | 0.002 | 0.45 |

[R]Levene's *F* test $p < .05$. The assumption that the two groups were approximately equal in variances was rejected.

*Significance

The results showed no significant differences between the two groups of participants on the deep, strategic, orsurface approaches to learning. However, four subscales and 15 individual items showed differences.

ABCs reported significantly higher interest in ideas and related items than the Taiwanese students; whereas, the Taiwanese reported significantly higher interest in seeking meaning and related items than ABCs in the deep approach subscales. The results of the deep approach indicated that the ABC group reported that they were more reliant on abstract conceptualization and active experimentation, which is similar to the Western styles of the learning experience. The Taiwanese group reported that they were more reliant on reflective observation and concrete evidence, which is characteristic of an Asian style of learning experience (Joy& Kolb, 2007).

In the strategic approach subscales, Taiwanese students appeared to be equipped with better learning strategies. They organized their studying and managed their time better and were more highly motivated to study than ABCs. The related individual items showed these twogroupsmonitoredtheir study effectiveness in different ways: the Taiwanese group kept their focus on studying to get the most out of the course and thinkingabout how to managean assignment or exam question best before starting work.The ABC group would go over the work they had done carefully to check that the reasoning made sense and met the requirements.The results were related to each group's learning and social context. For Taiwanese students, the study was for the college entrance test. They were required to give the right answers while managing assignments or exams. For ABC students, the teaching and learning context encouraged students to give their own opinions or ideas for assignments; there were no standardized *correct*answers as long as students could think through their study.

In the subscales of the surface approach, the ABC group responded significantly higher in following the syllabus while studying.They reported that they tended to pay close attention to the assignments and exams required, and used rote memorization to cram in as much as they could to get the highest grades possible to ensure their future careers. The Taiwanese group responded significantly higher with respect to thelack of interest in studying and did not believe there wasa connection with what they studied compared tothe ABCs.

Both groups responded significantly higher in using rote memorizationin learning but scored high on different items in the unrelated memorizing subscale: The Taiwanese group was more focused on concentrating on just memorizing what they had to learn even though they thoughtwhat they were studying made little sense and was like unrelated bits and pieces.The American group tended to cram in as much as they could even when they were not sure what was important but often had trouble making sense of the things they needed to remember. The results of the current study showed that the fear of failuremight become a driving force to make ABCs use rote memorization to achieve the highest possible grades. Taiwanese students believed that continuing in college was the right path to follow even if they did not like the major or school.

## CONCLUSION

Researchers have been using cultural dichotomy theories to investigate how cultural characteristics influence students' learning styles and havefoundthat cultural characteristics influence students' learning approaches and study styles (Boland et al., 2011; De Vita, 2001).As Urban (2001) stated, from an anthropological point of view, culture, like DNA, was transmitted from generation to generation but in a less stable way and in various forms, like making children repeat verses or folk songs, or playing games of rules to ensure knowledge. Also, beliefs and values were passed down from generation to generation but gradually became diluted as they assimilated into the main society in which they lived. The ABCs in the current study were mostly of the second generation. As Edelstein (2010) stated, the first-generation immigrant parents often transmitted their unalterable cultural concepts to their second-generation children. The results of the current study would suggest that ABC's learning approaches were influenced by their cultural background, which they inherited from their parents, and social/learning contexts from the society inwhich they live.

Au and Entwistle (2001) found that Hong Kong students reported a positive relationship between active rote learning memorization with understanding (deep approach) and the strategic approach. Sun and Richardson (2011) compared Chinese college students who studied in the United Kingdom and English college students by using RASI. They found under the controlled learning context, neithergroup of students showed a significant difference in the unrelated memorizing subscale. The researchers concluded that using rote memorization as a learning strategy is one of the stereotypes about Chinese learners. The findings of the current study showed results similar to these two studies. Both groups of students believed knowledge was built from remembering things well, acquiring facts and information, and being able to use the acquired information. However, it was not unrelated memorizing nor wasit considered a surface approach. Using rote memorization as a learning strategy is rooted in Chinese learning (Sit, 2013), which is opposite in Western culture. Western culture considers it as rote learningand also associates it with poor academic outcomes (Au & Entwistle, 2001).

CHC education has the distinct premise that learning and understanding occur through memorization.Memorization is not a simple reproductionof knowledge but rather a precursor and accessory to understanding.Memorizing is the first step of learning, then understanding, then incorporating one's experiences into what one has learned (Lee, 1996). Au and Entwistle (2001) concluded, "the Chinese approach to studying seems to make memorization an accepted part of understanding, rooted in the Confucian heritage" (p. 15) and agreed that memorizing with understanding is part of the learning strategy for Chinese learners.

Many Chinese with a higher educational background who immigrated to the United States had done relatively well in their careers but still had difficulty penetrating into some sectors of economic and political occupations because of discrimination and language barriers. For them, education provided a channel for social mobility and certain professions, such as engineering, technology, and medical fields, and this allowed them to be more independent from mainstream society to avoid occupational discrimination (Hirschman & Wong, 1986). They invested in their American-born children's education and encouraged them to pursue "useful" professions for their future careers (Pearce & Lin, 2007). They were more likely to believe that success in life was related to the subjects studied in school and their children's high school grades (Sue &Okazaki, 2009). These immigrant parents pass down their insecurity for future job revenues and their fear of discrimination and encourage their children to follow the parents' beliefs.

The motivation subscales in the ASI include intrinsic (Achieving) and extrinsic (Fear of Failure) motivations. ABCs scored lower in the intrinsic motivationbut higher in extrinsic motivation subscales than Taiwanese students.Because of fear of failure, ABCs are more bounded by syllabus to increase their chances for a brighter future. Taiwanese student's learning was more driven by intrinsic motivation than ABCs, which suggests that they were more motivated by personal interests and self-approval in their learning.

Even though ABCs were born in the U.S.A. and joined mainstream society and schools, they did not have language barriers and had fewer social and cultural difficulties compared with their immigrant parents. However, the results of the current study exhibited that ABCs were the generation who lived in two cultures. Their learning approaches were rooted in both traditional Chinese culture and Western culture. Their learning was inspired by extrinsic motivation. They believed that rote memorizing was the foundation of understanding and believed that learning was for a pragmatic reason, to earn the highest grades possible. These ideals would ensure their future success and lessen the fear that they might not find a suitable job in a relatively narrow job market. However, they more likely adapted Western learning approaches. They valued critical thinking and engaged new ideas that went beyond textbooks.

The current study revealed that ABCs' learning approaches were bounded by their unique cultural heritage and their social/educational experiences. This sheds some light to help us better understand their learning conceptions and strategies. To encourage ABC students to adopt higher quality approaches to learning, such as project-based, discussion, debates, or other activities and use various ways of assessment to evaluate their learninginto a more meaningful process instead of merely test- or grade-oriented learning.To help ABCs exploringdifferent areas of studies and career opportunities by preparing them with various skills other than academic studying, such as speaking skills and creativity. And toprovide ABCs more group work assignments to encourage them tocollaborate with other students and couple that with a grading system based on interdependence rather than isolation ABCs might show a shift from their syllabus-bound style of learning.

## LIMITATION AND STUDY FORWARD

The majority of ABCs' parents came from Mainland China; whereas, the comparison group was Taiwanese students. Although both populations are Chinese and possess an inherent Confucius culture, China and Taiwan have been isolated from each other for over 50 years because of political issues (Dumbaugh, 2009). People who live in these two regions mighthave different ways of thinking about teaching and learning.Further research is needed to investigate ABC college students' learning approaches by usingsamples from mainland China as a comparison group to determine whether there is a difference in their learning approaches. A mixed methods study could be conducted to investigate the differences between second and third generations regarding their learning approaches, self-identities, job preferences and job opportunities.

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