What do Chinese Students Say About Their Academic Motivational Goals—Reasons Underlying Academic Strivings?

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Although differences in academic motivation may exist across cultures, research on academic motivational goals has been Western-focused and relied on Western originated questionnaire. There is a dearth of studies adopting bottom-up, emic, and in-depth approaches to explore East Asian students' academic motivation. This study describes Chinese students' academic motivational goals in their own words. Participants were 28 11th-grade students (Mage = 16.1 years, age range: 15-17 years, including 15 males) from urban, rural, and suburban regions. They were interviewed in individual sessions and asked open-ended questions, such as "Why do you engage in academic tasks?" Inductive content analyses suggested that these students wanted to do well academically or engage in academic tasks for a wide variety of reasons. Among these, the most salient were: (1) to obtain college admission and elevate social status; (2) performance-oriented reasons; (3) to master the knowledge and develop competence; (4) family-oriented reasons; and, (5) personal interest. Furthermore, their responses suggested many students viewed education as a means to an end. They sought to (1) master knowledge and gain good results on college admission examination for upward social mobility; and, (2) to achieve high performance and outperform others for family-oriented reasons.

Keywords: academic motivational goals; Chinese learners; adolescence; interviews; social-academic goals

Introduction

Academic motivation has been a central concern in education. Researchers have explored goals to explain why individuals engage in academic tasks, and these goals found to be important determinants of academic engagement and performance (Grant & Dweck, 2003; Huang, 2012). Due to globalization and the increased international mobility of students, students from diverse sociocultural backgrounds are increasingly studying in the same class and have more interactions than ever before. As such, cultural differences and similarities in academic motivational goals have received more attention recently. Cross-cultural studies have documented many cultural variations between North American (e.g., America and Canada) and East Asian (e.g., China and Japan) countries, such as individualism and collectivism (Oyserman, Coon, & Kemmelmeier, 2002), and the Socratic approach and Confucianism (Tweed & Lehman, 2002), that are likely to shape or influence students' reasons for learning. East Asian students' goals may differ from Western counterparts because of differences in cultural values, social norms, and educational contexts (Authors, 2018; Zusho & Clayton, 2011).

The problem is that although differences in academic motivation may exist across cultures, research on academic motivational goals has relied on constructs that have developed based on research with Euro-American populations (Henrich, Heine, & Norenzayan, 2010). Most studies have typically been conducted in North American, individualist cultures, with research samples typically from the so-called Western, Educated, Industrialized, Rich, and Democratic (WEIRD) societies.

There is limited research on, and a relatively poor understanding of East Asian students' academic motivational goals. Most of the limited studies on academic motivation among East Asian students have focused on Western-originated mastery goals (i.e., to acquire and develop competence) and performance goals (i.e., to demonstrate competence and outperform others) (Zusho & Clayton, 2011). Moreover,

East Asian researchers have mainly used existing Likert-type questionnaires to assess students' academic motivational goals (Chen & Wong, 2015; Xiao et al., 2016). These questionnaires provide only a restricted range of choices, which cannot uncover indigenous academic motivational values and limit descriptions of the content of motivational goals (Urdan & Mestas, 2006).

The large population of East Asian students also underscores the need to understand their academic motivational goals, and promote adaptive learning among them. Notably, China, with 1.4 billion people, is the world's most populous country, and has the world's largest educational system. Against this background, this study focused on the academic motivation of Chinese students in Mainland China, which is a Confucian-heritage culture and collectivist society. The purpose of this study is to describe Chinese high school students' reasons for engaging in academic tasks using an inductive qualitative approach.

Reasons for Engagement in Academic Tasks

Many theorists have adopted a goal construct that is construed broadly as a combination of any reasons and aims for action in achievement settings (Dowson & McInerney, 2003; Wigfield et al., 2015). In this paper, academic motivational goals specifically refer to reasons for engagement in academic tasks or doing well academically ("why"), which is distinguished from the aims and results individuals seek to attain in academic settings ("what").

Most previous studies have relied on a trichotomous framework. Mastery goals represent the purpose of understanding materials, developing new skills, and improving competence; performance-approach goals focus on ability demonstration and outperforming others, while performance-avoidance goals focus on avoiding demonstrating incompetence (Grant & Dweck, 2003; Hulleman, Schrager, Bodmann, &

Harackiewicz, 2010). The literature has indicated different goals could yield different consequences (Huang, 2012). Mastery goals have generally been associated with higher achievement, whereas performance-avoidance goals are maladaptive. The effect of performance-approach goals has been found to be less consistent, with several studies indicating their maladaptive effect, and others reporting a positive relation to academic achievement (Huang, 2012; Senko, Hulleman, & Harackiewicz, 2011).

Conceptions of mastery and performance goals originated in North American, while an increasing number of goal theorists have posited that sociocultural context influences the adoption of goals. For example, individuals in collectivist societies tend to seek relatedness with others, and so are more willing to endorse the goals of significant others or collective groups (Cheung & Pomerantz, 2012). Chinese scholars have proffered the construct of socially-oriented achievement motivation (SOAM) to describe how students view academic achievement as an obligation to parents and significant others (Tao & Hong, 2014; Yu & Yang, 1994). A broader concept, called social-academic goals, is also proposed to represent students' aspirations to do well academically to fulfil social needs (e.g., to fulfil obligations to others, to elevate social status, to assist others) (Dowson & McInerney, 2003; Urdan & Maehr, 1995). Researchers have posited that students in collectivist societies are more likely to endorse social-academic goals than those from individualist societies (Authors, 2018; Tao & Hong, 2014). Despite the fact that social influences are assumed to be salient among East Asian students, only a handful of studies have examined social-academic goals.

Measurement Issues

Existing Western-based top-down instruments have been typically used to assess East Asian students' academic motivational goals (Chen & Wong, 2015; Xiao et al.,

2016). These questionaires only provide a restricted range of choices that assess specific academic motivational goals (usually mastery and performance goals), summarized mostly based on North American samples.

Some researchers have criticized the overwhelming adaptation of measures that originated in Euro-American contexts in non-Western areas because it may obscure indigenous motivational values, and present a distorted range and complexity of students' academic motivational goals (Lee & Bong, 2016; Urdan & Mestas, 2006; Zusho & Clayton, 2011). As mentioned, cultural and social factors may influence students' reasons for academic achievement. On the one hand, researchers should not take it for granted that East Asian students will espouse the mastery and performance goals of Western students. Urdan and Mestas (2006) have posited that surveys and experimental methods have a sort of "now-that-you-mention it effect" that guides students to think along specific lines. Participants may not spontaneously report these goals, but when reminded by questionnaire items are very likely to do so.

On the other hand, cultural factors in East Asian countries may promote indigenous values of education. For example, Confucianism strongly endorses filial piety, which requires strict obedience to and respect for parents. Emerging evidence has demonstrated that some Chinese students view academic achievement as a way of exercising their filial duty (Cheung & Pomerantz, 2012). High value is also put on pragmatic learning. In feudal China, most people were peasants, and the civil service examination was used to select officials which brought wealth and social prestige to the man and his family (Authors, 2019). Even after the imperial examinations were abolished, the pursuit of scholarly honour and official positions was replaced by getting good degrees and good jobs. The salient function of the current National College

Entrance Examination (NCEE) in China is to select the brightest to enjoy limited higher educational resources.

Existing Western-based questionnaires limit description of the content of academic motivational goals, making it difficult to reveal indigenous values. Thus, many researchers have pointed to the importance of qualitative methods in academic motivation research (Dowson & McInerney, 2001; Lee & Bong, 2016). For example, interviews are especially useful in providing an in-depth understanding of culture-specific traits.

Qualitative Methods

In response to criticisms of quantitative instruments, a small number of studies have adopted qualitative measures to investigate academic motivational goals (Dowson & McInerney, 2001; Lee & Bong, 2016; Li, 2006). For example, Dowson and McInerney (2001) conducted interviews to identify and describe academic motivational goals. A sample of 86 Australian students responded to questions like, "Do you want to do well at school? Why?" Through content analysis, Dowson and McInerney (2001) found that students studied to elevate social status and to gain approval.

Given the necessity of examining Chinese students' academic motivation from a bottom-up perspective, it is surprising there has been lack of qualitative research among Chinese students. The literature review located one such study, by Li (2006), who invited 259 Chinese adolescents to respond to 10 identical open-ended sentences to identify their goals (e.g., "my goal of learning is…"). The findings of Li's (2006) study demonstrate Chinese students hold both individual- (e.g., developing ability and skills, aspiration composites) and socially-oriented goals (e.g., benefiting others, developing social relationships). However, there are two major problems in Li's (2006) study. First, a thorough response to open-ended sentences requires time and energy, so participants

tend to zip through surveys and give out very simple responses (Creswell, 2014). Thus, detailed descriptions of their goals were still limited. Interviews are encouraged to use because probing questions can be asked to elicit more information. Second, 96% of respondents were urban residents from large provincial capital cities; as urban residents are only half of China's population (National Bureau of Statistics of China, 2016), the sample may not be representative of all Chinese adolescents. Similarly, other researchers have pointed out the need to consider both urban and rural residents when examining Chinese learners (Fuligni & Zhang, 2004; Rao, Chi, & Cheng, 2010). To deal with the above limitations, this study conducted interviews with open-ended questions to reduce the influence of existing Western instruments. Furthermore, it involved urban, suburban, and rural students. This study mainly addressed the question, "What do Chinese students say about their reasons for academic engagement?"

Methods

Participants

A sample of 28 11th-grade students (15 males and 13 females, 15-17 years old, *Mage* = 16.1) from three public high schools in Mainland China participated in this study. Over 98% of the participants were ethnic Han. Students were purposively chosen to vary in residential areas and academic achievement. School A was located in a developed metropolitan urban area (Shanghai Municipality, $n = 10$), School B in an underdeveloped rural area (Jiangxi Province, $n = 9$), School C in a developing suburban area (Zhejiang Province, $n = 9$). School A's area was considered more international and less traditional than those of Schools B and C. These schools were recommended by personal contacts. In each of the three schools, one 11th-grade class was randomly selected. In order to have a sample that varied in academic achievement, homeroom

teachers were asked to help identify students of high (i.e., top 30%, $n = 9$), average (i.e., middle 40%, $n = 10$), and low achievement (i.e., bottom 30%, $n = 9$), based on school performance. According to participants' report, only 22% of the fathers (or mothers) in Jiangxi had graduated from colleges, compared to 80% in Shanghai and 55.6% in Zhejiang; 10.7% of students lived in a single-parent household (see Appendix for more demographic information).

Procedures

After receiving approval from school principals, invitation letters were sent to students via their homeroom teachers. Each participant was interviewed in an individual session by the first author in Mandarin, who was familiar with neither the school teachers nor the students. The interview protocol was based on existing qualitative studies that examined students' academic motivational goals (Dowson & McInerney, 2001; Li, 2006). The questions were open-ended and flexible to reduce guiding effects. First, participants needed to respond to a set of ice-breaking questions about school life (e.g., "What do you think of your school life?"). Then, the interviewer asked a set of core questions to discover students' academic motivational goals, such as "Do you want to do well academically? Why?" "Why are you engaging in academic tasks?" After each of these core questions, a follow-up question was asked to probe for more information (e.g., "Can you tell me a bit more about that?"). Finally, each participant was given a small gift as a token of appreciation. Each interview lasted for approximately 30 minutes and was audiotaped.

Data Analysis

NVivo software was used in analysing interview transcriptions. Each transcript was coded to include basic information. For example, SH, S3, G, H referred to the third

participant in Shanghai, who was a girl of high academic achievement (SH = Shanghai Municipality, JX = Jiangxi Province, ZJ = Zhejiang Province; B = Boy, G = Girl; L = low achiever, M = average achiever, H = high achiever).

Inductive content analysis was conducted. This is a qualitative method for the subjective interpretation of the content of text data, through the systematic coding and identifying of themes or patterns (Krippendorff, 2012). Additionally, inductive analysis goes beyond offering a broad-brush picture to obtain a deeper, more nuanced understanding of each category.

Apart from the first author, another coder –a postgraduate student in educational psychology – was also involved. First, the two coders read all the interview transcripts individually. Next, the two coders identified transcripts showing students' reasons for doing academic tasks. Meaningful sentence phrases were used as units of data instead of the whole response, because students may propose several reasons in a single response. For example, the response "I learn because I want to outperform others. I want to enter a college, and find a job in the future" was broken into three units. Through constant discussion, the two coders built a dataset that included all units of data.

They later classified the units of data into specific categories that captured recurring patterns. The two coders first coded five transcripts together and built a coding scheme through constant discussion. They coded the remaining transcripts independently. New categories were expected to emerge throughout the data analysis process. Kappa was .79. Disagreements over classifications was discussed until agreement was reached. "Member checks" were conducted by returning the transcriptions and tentative coding to the participants for review and comments (Creswell, 2014). After coding, the coding scheme and selected transcripts were translated from Chinese to English by a native Chinese who was fluent in English. The

author and another bilingual expert engaged in discussions of the original and translated quotes to evaluate the consistency and corrected the discrepancies.

Results

Reasons for Academic Engagement

A total of 202 statements related to students' academic motivational goals were coded from the interview transcripts. Participants reported multiple reasons for engaging in academic tasks and wanting to do well academically, such as elevating their social status, performance-oriented reasons, mastering knowledge and improving competence, and interest. Overall, the two coders established ten sets of students' academic motivational goals. Table 1 presents the rank order of the reasons expressed by students, and the number and percent of participants who reported each category. Due to the small sample size, it was impossible to rigorously compare the academic motivational goals of students from different areas and academic achievement levels. However, through primarily comparisons, it was noticed that mastery-oriented students tended to have relatively high academic performance, as elaborated in the corresponding category.

[Table 1 near here]

The intention to attain elevated social status through academic achievement stood out as having the highest frequencies. Sixty-four statements were identified in this category, which was reported by most students (n = 23, 82%). More specifically, it had four sub-goals: gaining college entrance (e.g., "studying enables you to get into a college" (JX, S3, G, L)), finding a job (e.g., "I just want to find a job" (SH, S8, G, M)), earning more money (e.g., "a high-paid job; money is the most important thing" (JX, S4, B, H)), and having more career choices in the future (e.g., "study well, so that you

can have more choice about what to do in the future" (SH, S3, G, H)). The previous three sub-goals parallel the three key indicators of socioeconomic status (SES) – educational level, occupation, and income. Students' responses generally revealed that getting into college and subsequently obtaining a degree could greatly increase their chance of being recruited and securing a successful economic future. Concerning the fourth sub-goal (having more career choices in the future), students reported their intention to maximize future life chances and have a good future, which was also associated with occupation and income ("I want to have more job offers"). This sub-goal seems intimately related to students' interest, as some also expressed intentions to choose a career in which they were interested.

The second category was a composite of performance-oriented reasons (41 statements, n = 19, 68%). It included four sub-goals: achieving good results on examinations; outperforming others on examinations; avoiding failure on examinations; and demonstrating ability. Many students said they wanted "to get a good score in NCEE" (JX, S8, G, M); of those students, many added that getting good NCEE outcomes meant outperforming others. Thus, it was difficult to distinguish the first two sub-goals because getting a good examination outcome was inevitably associated with getting a high ranking; "I ranked approximately 24th in the last mock examination. I hope I can get approximately 15th this time" (JX, S8, G, M). One student elaborated, saying, "If you get a high score because you answer most of questions correctly but you rank at the bottom as others may answer more questions, then your high scores make no sense because college enrolment is based on rankings. Anyhow, the college only admits top students" (ZJ, S3, G, H). However, only one student reported avoiding failure and ego-involved reasons, respectively. For example, one girl reported the desire to

demonstrate her ability by doing well on academic tasks; "Studying well means I am smart. I want others think I am smart" (ZJ, S2, G, M).

The students who reported this composite of performance-oriented reasons typically stated learning was not enjoyable, and that they endured the hardship because they wanted to gain good results. As one said, "Why do I study? I think no one enjoys learning. It is so painstaking. We study to get a high performance. No pain, no gain" (ZJ, S8, B, M). To maximize good outcomes on examinations, some students reported only concentrating on curriculum that was essential for NCEE-examined subjects, and not devoting energy to learning what was not required by examinations. One student reported, "Many students do not concentrate in aesthetic and moral education class, even sleep, because what we learn is not tested" (JX, S3, G, L), while another said, "We did homework of NCEE-examined subjects in some not important classes" (JX, S8, G, M). Even in NCEE-examined subjects, students "stopped the teacher from teaching topics that are not tested" (ZJ, S8, B, M). Focusing on examinations constrained some students from focusing on their favourite subjects, as they needed to improve their overall performance by focusing on weak subjects; "I like Chinese class very much. However, as the rank is based on overall scores, I need to pay more attention to my weak subject—mathematics. I have no interest in mathematics at all" (ZJ, S5, B, L).

The third category was a composite of mastering knowledge and developing competence (31 statements). Over half of the students (18 students, 64%) expressed their intentions to master knowledge and improve competence and skills. Many of them reported, "The most important thing is to master knowledge" (SH, S5, B, H) and "I feel happy when I know more" (SH, S6, G, H). Others also mentioned a desire to "widen my horizons" (SH, S8, G, M) and "get the hang of something" (JX, S2, B, M). Interestingly, it appeared students who sought to master knowledge and develop competence tended

to have higher achievement than those who did not. Of the 18 students who reported mastery-oriented reasons, nine were high achievers and six were average achievers, whereas only three were recognized as low achievers. All nine high achievers provided mastery-oriented reasons for academic engagement.

Another category, family-oriented reasons (32 statement), had the fourth highest frequency. Half of the sample (14 students, 50%) reported doing academic tasks for family-driven reasons. First, ten students (36%) reported they wanted to study well to please their parents. For example, one student said, "I know many parents are extremely concerned about their children's education. I hope that I can do well so that my parents can be happy and do not need to worry about my study" (SH, S3, G, H). Second, six students mentioned their parents had made great sacrifices for their education, such as sending them to a "costly cram school," (JX, S9, G, L) "buying learning materials," (ZJ, S6, B, H) and "renting a house near the school" (ZJ, S3, G, H). Thus, they hoped to study well to repay their parents' sacrifices. As one student from an economically disadvantaged family said:

> My parents do very heavy manual work, but only earn very little money. They save money, and are reluctant to buy food and clothes for themselves. Although they are frugal with themselves, they invest a lot in my schooling…. What they hope is that I will study well and enter a good college. So, I do want to repay them by studying well. (JX, S2, B, M)

The third family-oriented reasons sub-goal was the intention to improve family economic level (n = 3, 11%), and was cited by three students in the underdeveloped rural area in Jiangxi. Their impoverished family conditions may have motivated them to study well to get a high-income job and be able to support their family materially. For example, Mary, the sixth child of a very poor family in Jiangxi, said, "I want to study

well so that I find a good job in the future, so that I can let my siblings and parents lead a better life" (JX, S3, G, L).

The fifth category was interest (17 statements). Thirteen students (46%) reported their desires to learn something out of interest, and passionately talked about their interests, such as "wonderful quantum mechanics, and black holes," (ZJ, S6, B, H) "magical sea creatures," (SH, S6, G, H) and "Criticism of Kant" (ZJ, S1, B, M). Among them, many reported they generally initiated learning (e.g., " I searched the Internet to buy some books to read" (ZJ, S6, B, H)), persisted with learning (e.g., "I do not want to stop" (SH, S6, G, H)), and got enjoyment (e.g., "I feel so excited to know this" (ZJ, S1, B, M)).

Unexpectedly, five statements were identified as "no reason," which is the sixth category. Four students (14%) stated they had not thought of the reasons for doing academic tasks (e.g., "I do not know why I need to study" (JX, S9, G, L)). Although not compulsory, some stated they got into high school without thinking of their reason. One student said, "Getting into high school is a natural process" (SH, S1, B, M). Another student also felt confused, saying, "I do not know why. I just follow most other students" (JX, S8, G, M). The remaining two students similarly pointed to family-oriented reasons, but in a more passive way. For example, one said, "I do not know why. Since I was in primary school, teachers and parents told me you should study well, so I learn. I just follow their request" (JX, S9, G, L). These two students seemed reluctant to conform to parents' and teachers' requirements, whereas those who reported family-oriented reasons (the fourth category) were more proactive in pleasing parents and meeting their expectations.

Each of the four remaining categories was represented by less than 3% of all identified statements. The seventh category was to apply knowledge in life; three

students stated the value of education was to learn applicable, pragmatic knowledge, saying, "Physics enables us to manage electric circuit and repair bulbs" (JX, S2, B, M) and "Learning English lets us communicate with foreigners and work in international companies" (JX, S8, G, M). The eighth category was to help others and society as whole, which pertains to students' intentions to contribute to society through education. The ninth category referred to learning as a duty; three students maintained it was the duty of a student to learn. The last category was students' intentions to study well to make friends with high achievers.

Education as a Means to an End

These ten categories all pertain to the reasons Chinese students reported for engaging in academic tasks. The two coders noticed that a sizeable number of students viewed education as a means to an end. From that, the coders distinguished two forms of academic motivational goals. Some categories refer to more proximal and competence-oriented reasons for learning, including "a composite of mastering knowledge and developing competence," and "performance-oriented reasons," whereas others refer to more abstract underlying reasons, including "elevate social status," "family-oriented reasons," "apply knowledge," and "build up social relationships." Table 2 presents the three major patterns reported by students who viewed education as a means to an end.

[Table 2 near here]

Ten students (36%) reported wanting to master knowledge and develop competence to elevate their social status. Twenty statements related to this pattern were identified. Some students said, "My goal of learning is to master knowledge, so that I can be a biologist in the future" (ZJ, S6, B, H), or "I need to develop my competence so that I can make a success career in the future" (JX, S1, B, H). Among them, many

students mentioned the importance of good performance on examinations to get into college. However, they generally placed more value on mastering knowledge and developing competence. For example, one student said:

> I think mastering the knowledge is more important than getting high scores on examinations. Because, you know, there are some ways to get high scores, such as narrowly focusing on what is tested, and doing lots of exercises, even cheating. However, I want to master the knowledge, so that I can become a biologist in the future. I do not care so much about examination outcomes. It does not truly reflect what you have learned (ZJ, S6, B, H).

On the other hand, eight students (29%) reported striving to achieve good scores and high rankings in NCEE to get into college, especially top universities, and find a promising job with high income. These students reported that entering college was the only route for most people to elevate social status; "Although some people find a job and lead a comfortable life without a bachelor's degree, for the poor like me, a good score in NCEE is the only route to change my fate" (JX, S3, G, L), or "We have no choice, only compete with others to get a degree and to get a job" (ZJ, S8, B, M). These students reported most companies took a college certificate as a rigid index in recruitment. As one student said,

> For the students who graduate from well-known universities, finding a job is a piece of cake. Before they graduated, many Fortune 500 companies and state-owned enterprises already go to recruit them in universities. These students can find an honourable job and get a high income. However, for those who graduated from less prestigious universities or did not have a bachelor's degree, it is very difficult to find a job. (JX, S4, B, H)

Notably, although these two groups of students both viewed education as a means to elevate social status, there were important differences between them. Those who emphasized mastering knowledge and developing competence seemed to have

linked the current curriculum to their future career and were more concerned with personal growth. For example, some students mentioned that knowledge and competence were beneficial for career development (e.g., "I learn English and Chinese so that I can communicate well when I do business" (ZJ, S2, G, M)), and some reported having already made decisions on what kind of career to pursue. Typically, they expressed their academic motivational goals in such terms as, "I want to become/be… so it is important (I need) to learn (certain subject) well now." In other words, students who placed a high value on mastery realized the utility of current tasks for their career and integrated this learning stage into their life plan.

In contrast, students who reported more concern about examination performance had not specifically planned what type of job they would do in the future. They mostly expressed a more generalized material goal of finding a stable job and making money, which was a purely pecuniary function. One student said:

> I do not know what I want to do in the future, and lead what kind of life. I just know it is important to get a good examination outcome so that I can enter a good college. And the question of choosing what career is left to the future. (ZJ, S3, G, H)

As well, they did not realize the utility of knowledge in daily life, saying, for example, "What is the value of learning mathematics? We learn mathematics at such a difficult level just for NCEE. However, who use infinitesimal calculus to calculate how much we need to pay in the supermarket? And not everyone becomes a mathematician" (JX, S2, B, M). Some even mentioned present-day task content made no sense to them, and they wanted to get high examination outcomes with the least effort (e.g., "only learn what is going to be tested" (JX, S8, G, M)).

Some students wanted to achieve good scores and high rankings for family-oriented reasons, especially to please their parents. For instance, one student said, "I

want to make my parents happy, they stressed rankings a lot, so I want to outperform others in the class" (JX, S3, G, L). Most reported that their parents usually evaluated their examination outcomes in comparison to their peers; "You know, when the relatives sit together during the family reunions, they have nothing to do but talking about children's learning. They usually compare with each other on children' examination scores and rankings" (JX, S9, G, L). Another student reported her parents felt proud and happy because she was a high-achiever; "I tend to be best among cousins. I am proud of myself, so are my parents" (SH, S3, G, H). Yet another stated, "My father does not want to lose face when his colleagues compare children's examination performance, so he wants me to be a high achiever" (ZJ, S5, B, L). On the other hand, some students reported that, although their parents expected them to make an effort rather than focus on learning outcomes, they still focused on results rather than the process, to gain parental approval; "My parents usually tell me examination results are not important, they only want me to exert effort, however, who can measure and prove my effort, only the performance. In fact, they infer effort from my performance" (SH, S3, G, H).

Discussion

In the present study, Chinese students reported a wide variety of reasons for engaging in academic tasks. The social-academic goals (i.e., to ensure college entrance and elevate social status, and family-oriented reasons) were the most common. Western-originated mastery and performance goals (i.e., to master knowledge and develop competence, and performance-oriented reasons) also appeared frequently. Our findings are largely consistent with Lee and Bong's (2016) study of achievement goals among students in collectivistic Korean society. They found that social status goals and parent-

oriented goals appeared most frequently, followed by normative and outcome performance goals, and mastery goals, respectively.

Categories such as performance-oriented reasons, and mastering knowledge and developing competence can be readily mapped into existing literature on performance and mastery goals (Huang, 2012; Hulleman et al., 2010). This study identified specific sub-goals of the composite of performance-oriented reasons. The multiple sub-goals are in line with Grant and Dweck's (2003) separation of performance-approach goals into outcome goals (i.e., getting good outcomes), normative goals (i.e., outperforming others), and ability-linked goals (i.e., validating ability). The participants endorsed many more outcome goals and normative goals than ability-linked goals. This is compatible with findings from other studies, that Chinese students are very concerned about getting good scores and rankings on examinations (Hau & Ho, 2010; Authors, 2019). This study also revealed that most students sought to approach a positive, desirable possibility (i.e., performance-approach goals), whereas only a small percentage were motivated by avoiding a negative, undesirable possibility (i.e., performance-avoidance goals) (Senko, Hulleman, & Harackiewicz, 2011). Further, although the research sample was small, it seemed that the participants who sought to master knowledge and develop competence tended to have higher achievement than those who did not. This is in line with previous research conducted in both Western and Chinese contexts that reported a positive relationship between mastery goals and academic performance (Huang, 2012; Senko, Hulleman, & Harackiewicz, 2011).

Additionally, this study has provided direct evidence that students in China spontaneously reported wanting to do well academically for family-oriented reasons, to contribute to the society, to meet social role obligations, and to build up their relationships with peers, which support the prevalent claims that Chinese students are

motivated by socially-oriented reasons (Hau & Ho, 2010; Tao & Hong, 2014; Urdan & Maehr, 1995).

Notably, of the socially-oriented reasons reported by students, half were family-oriented reasons. These students mentioned that their parents placed a high value on education, so they sought to please their parents, repay their sacrifices, and economically support the family. Previous studies on SOAM have shown that Chinese students' academic motivation to be positively related to their sense of obligation to support, assist, and respect the family (Tao & Hong, 2014; Yu & Yang, 1994). As a central virtue in Confucian philosophy, filial piety posits that parents give birth to and raise their children, so their children are obligated in turn to repay their parents by obeying their requests (Cheung & Pomerantz, 2012; Authors, 2016). In this study, some students characterized their striving to do well academically as filial duty. Students in our study appeared to be more concerned about their families than their peers and teachers. In Fei, Hamilton, and Wang's (1992) seminal work on Chinese social organizations, Chinese society is described as ripples flowing out from the splash of a rock into the water. As with Confucianism, Fei, Hamilton, and Wang (1992) argued social relationships in China are nonequivalent and have distinct categories, and that the family relationship is the most intimate and important. Thus, it makes sense that Chinese children are primarily caring about their parents.

On the other hand, the intentions to help classmates and gain teachers' approval were not mentioned by any of the students. Previous questionnaire studies have shown that Chinese students want to do well at school so they can help classmates and gain teachers' approval (King, McInerney, & Watkins, 2013). It is well known that traditional collectivist values emphasize harmonious relationships and Chinese students are supposed to pursue collaborative learning and problem solving (Yu & Yang, 1994).

Surprisingly, none of participants reported striving to assist classmates in academic or personal development, or to gain teachers' approval, likely because they may agree with instrument items in questionnaires, but not necessary report them spontaneously in interviews. That is, when reminded by items, students might agree to please teachers or help other students, but these reasons may not be strong enough to initiate students' learning. Students may hold multiple reasons for learning, but some reasons are implicit and less important than others, so they may not spontaneously report them (Urdan & Mestas, 2006). Furthermore, no report of helping classmates can be explained by the severe competition among students. China has a competitive education system in which only a small number of those who finish senior secondary education can enter regular higher education institutions (Ministry of Education of the People's Republic of China, 2014; Watkins, 2010). The resulting intense competitions may constrain students' intentions to help classmates in academic tasks so they themselves can outperform those classmates and get opportunities for further education, which goes against the emphasis on collaborative learning in Chinese education in recent years (Dello-Iacovo, 2009; Watkins, 2010).

Although all these categories reflect students' reasons for academic achievement, many participants reported their intentions to achieve good scores and rankings, as well as to master knowledge and develop competence for underlying social reasons (e.g., to elevate social status, family-oriented reasons). These responses reflect that these students viewed education as a means to an end.

Previous studies have revealed that Chinese students generally characterize education as a way to attain upward social mobility (King et al., 2013). It is a long-held traditional belief among Chinese that education drives career and economic success (Authors, 2019). Specifically, this study identified two different patterns. First, some

students reported striving to master knowledge and develop competence to elevate their social status. They sought to obtain or maintain a future social status through improving their competence and skills and mastering knowledge. These students focused on career interest and personal growth, and reported they would be more able to develop a career if they were more competent and mastered more knowledge, meaning they had realized the instrumentality of their current tasks in developing their future career (Lee, McInerney, Liem, & Ortiga, 2010; Authors, 2019). Second, some students reported their intentions to achieve good scores and rankings to get into universities, and thereby access jobs and wealth. College admission in China has been characterized as score- and rank-determined (Watkins, 2010). Due to limited educational resources, enrolling in universities, especially good universities, is inexorably and unavoidably associated with competition. Although there are vocational and part-time educational programs, people generally prefer to pursue a bachelor's degree, especially at one of China's more prestigious universities. Like all countries, graduates of renowned universities have advantages in securing jobs after graduation.

Although both groups of students were concerned about social status, there were stark differences between them. Among those students who strove for upward social mobility, some were more concerned about personal growth and had linked current tasks to future career development, and so placed a high value on mastery; in contrast, others cared more about the purely pecuniary function of education, and were mainly concerned about examination scores and rankings. This could provide explanations to findings of Lee et al.'s (2010) study that students' intentions to have a good career were more closely related to mastery goals than performance goals, whereas students' intentions to gain money and material possessions were more related to performance goals.

Further, some students wanted to get good examination outcomes and high rankings as means to please their parents. Many scholars have posited that students interpreted the value of learning and standards of evaluation based on their parents' discourses and behaviours (Gonida, Kiosseoglou, & Voulala, 2007). These interpretations of how parents defined academic success can largely influence students' specific aims in learning. In line with the literature, participants in the present study reported that their parents admired high rankings and scores on examinations, so they strove to outperform others and achieve high scores.

Although academic achievement goal theory was chosen as its major theoretical framework, this study's findings also shed light on how self-determination theory works in a Confucian-heritage society and examination-oriented system. The three patterns of viewing education as a means to an end map well onto the three patterns of extrinsic motivation discussed in self-determination theory (Deci & Ryan, 2012; Wigfield et al., 2015). First, mastering knowledge and developing competence to develop one's career and enhance one's personal growth is a case of identification regulation in which students recognize and accept the underlying value of education. Second, achieving good scores and rankings to get into universities, and thereby access jobs and wealth, is a case of external regulation in which students want to attain tangible rewards. Third, some students viewed getting good examination outcomes and high rankings as a means to please their parents; this entailed introjected regulation in which individuals partially internalize parental expectations.

There are also some limitations to this study. First, although it included participants from both urban and rural areas of China, the sample was small. Thus, it was difficult to compare the academic motivational goals of students from different regions. Future research with larger samples from both rural and urban areas is needed

to uncover possible differences. Second, the findings of this study are limited to Chinese 11th graders. However, approximately 50% of Chinese junior middle school graduates are not able to continue their formal education in senior middle schools, as they fail the senior high school entrance examinations (Ministry of Education of the People's Republic of China, 2014). Therefore, this study is limited to students who are relatively high achievers. Little is known about the academic motivational goals of adolescents who cannot attend senior secondary schools. Future research should nevertheless include low, average, and high achievers in schools, and those who cannot attend senior secondary schools. Further, given the pivotal role of national examination, an interesting direction for future research would be to examine how data gathered from high school students preparing for the NCEE differs from that collected from college students. Third, participants may answer the interview questions in a socially desirable way because they were being interviewed by an older person who seemed like authority. Future research may also include anonymous self-administered questionnaires that reduce the salience of social cues to reduce the biases.

In summary, this qualitative study enables a deeper and more nuanced understanding of the academic motivational goals of Chinese high school students. The findings contribute to not only our understanding of Chinese students' academic motivation, but also to the development of a more culturally informed global psychology. One key implication of the study is that Chinese students reported having diverse academic motivational goals – not only commonly examined academic achievement goals, but also multiple social reasons for doing academic tasks, especially elevating social status and family-oriented reasons. Based on the relatively high natural incidence of concern social status goals, and family-oriented goals, more future studies

should be conducted on these two social-academic goals' impacts on Chinese students' learning.

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Appendix A. Participants' demographic information

Area	Student code	Gender	Achievement level	Parents' educational level (the higher)	single or 2-parent households
Shanghai	S1	B	M	College graduate	2-parent
	S2	B	L	Postgraduate diploma	2-parent
	S3	G	H	Postgraduate diploma	2-parent
	S4	G	L	College graduate	2-parent
	S5	B	H	Finished high school	2-parent
	S6	G	H	College graduate	Single parent
	S7	B	L	College graduate	2-parent
	S8	G	M	Finished high school	2-parent
	S9	G	M	Postgraduate diploma	2-parent
	S10	B	M	Postgraduate diploma	Single parent
Jiangxi	S1	B	H	College graduate	2-parent
	S2	B	M	Finished middle school	2-parent
	S3	G	L	Finished middle school	2-parent
	S4	B	H	Finished high school	2-parent
	S5	G	H	Finished high school	2-parent
	S6	B	M	Finished elementary school	2-parent
	S7	B	L	Finished middle school	Single parent
	S8	G	M	Finished high school	2-parent
	S9	G	L	College graduate	2-parent
Zhejiang	S1	B	M	College graduate	2-parent
	S2	G	M	Finished high school	2-parent
	S3	G	H	College graduate	2-parent
	S4	G	H	Postgraduate diploma	2-parent
	S5	B	L	Finished high school	2-parent
	S6	B	H	Postgraduate diploma	2-parent
	S7	G	L	Finished middle school	2-parent
	S8	B	M	College graduate	2-parent
	S9	B	L	Finished high school	2-parent

Note. SH = Shanghai Municipality, JX = Jiangxi Province, ZJ = Zhejiang Province; B = Boy, G = Girl; L = low achiever, M = average achiever, H = high achiever

Table 1. Taxonomy of reasons for academic achievement.

Academic motivational goals classification	Statements $N = 202$	Participants $N = 28$	H $n = 9$	M $n = 10$	L $n = 9$	SH $n = 10$	JX $n = 9$	ZJ $n = 9$
1. Elevate social status	64	23 (82%)	8	8	7	8	7	8
College entrance	28	17 (61%)	7	5	5	6	7	4
Find a good job	20	15 (54%)	6	6	3	4	6	5
Earn more money	8	6 (21%)	1	3	2	1	4	1
Have more choice on careers	8	6 (21%)	3	2	1	4	2	0
2. A composite of performance-oriented reasons	41	19 (68%)	7	6	6	6	8	5
Get good results	28	18 (64%)	7	7	4	5	8	5
Outperform others	10	8 (29%)	3	4	1	1	3	4
Avoid failures	2	1 (4%)	0	0	1	0	1	0
Demonstrate ability	1	1 (4%)	0	1	0	0	0	1
3. A composite of mastering knowledge and developing competence	31	18 (64%)	***9***	***6***	***3***	7	4	7
4. Family-oriented reasons	32	14 (50%)	5	6	3	4	5	5
Please parents	16	10 (36%)	3	5	2	3	4	3
Repay parental sacrifice	9	7 (25%)	2	4	1	1	4	2
Economically support family	7	3 (11%)	1	1	1	0	3	0
5. Interest	17	13 (46%)	5	5	3	5	3	5
6. Have not think of reasons	5	4 (14%)	1	2	1	1	3	0
7. Apply knowledge	3	3 (11%)	0	3	0	0	2	1
8. Benefit others and society	4	3 (11%)	1	1	1	1	0	2
9. Study is a duty	3	3 (11%)	0	2	1	0	3	0
10. Make friends with high achievers	2	2 (7%)	0	2	0	1	0	1

Table 2. Taxonomy of the patterns that view education as a means to an end ($N = 28$).

	Statements	Participants	Indicative quote
Mastering knowledge and improving competence to elevate social status	20	10 (36%)	"I want to find a job as a biologist. So, I study very hard to master knowledge especially in biology" (ZJ, S6, B, H).
Achieving good scores and high rankings in NCEE to elevate social status	14	8 (29%)	"I do not feel learning is enjoyable. I think most of us do not like learning. But I need to compete with others and outperform them for the college entrance. This is the only path to my future" (ZJ, S8, B, M).
Achieving good scores and high rankings on tests for family-oriented reasons	9	6 (22%)	"I think filial piety is to consider parents' needs. They want me to study hard and have high examination performance. So, I want to achieve high performance to make them happy" (SH, S3, G, H).

Dear Dr Wong and reviewers,

Re: MS Ref: CAPE-2018-0492.R1

What do Chinese Students Say About Their Academic Motivational Goals—Reasons Underlying Academic Strivings?

Thank you for the opportunity to revise the above-captioned manuscript for further consideration for publication in *Asia Pacific Journal of Education.* The revision is attached for your perusal. We also want to thank the reviewers for their encouragement and enthusiasm for the paper's goals.

Reviewer 1's comments	
My second review of this MS revealed that the authors took into account all my previous comments and engaged with them. I thank the authors for the time they devoted to my feedback. I have no further comments or suggestions and, from my standpoint the MS is ready for publication.	Thanks very much for the positive comments.
Reviewer 2's comments	
1.Each of the schools that participated were very different. There were 28 participants. Could you include a table with information about each participant as the students are likely to come to school with different background knowledge and perhaps cultural influences such as the traditional role of family. Rich description would allow a better understanding of the cultural capital students are likely to bring to their academic work.	Thanks very much for this suggestion. We add an Appendix for more demographic information of each participant (see p.8 first para and Appendix p.29)
2. I understand how you were trying to mitigate power relationships by saying that the interviewer knew neither the teachers or the students but perhaps this is better addressed as a limitation. The students were being interviewed by an older person in a school who seemed like a person who had authority to ask questions.	Thanks very much. We indicate the interview as a limitation in the revised manuscript (see p.24 first para).
3. It was interesting to hear that the coding was done in Chinese. Were the quotes back translated or the translation checked by the participants in any way?	Thanks very much for pointing out this issue. After translation, the author and another bilingual expert discussed and ensured the consistency of original and translated quotes (see p.10 first para).

We are appreciative of reviewers' critical but well-thought comments. My co-authors and I are very grateful for your high quality feedback and patience. We really hope that this manuscript can be

accepted for publication after this round of revision.

Yours sincerely,

Authors.