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Educational success of low-income and first generation college students in private colleges of China

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EDUCATIONAL SUCCESS OF LOW-INCOME AND FIRST GENERATION COLLEGE STUDENTS IN PRIVATE COLLEGES OF CHINA

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DEDICATION

This work is dedicated to my mother, Yunlian Guo, my husband, Rixiang Jiang (Ricky), and my son Mulan Jiang (Shepherd).

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Educational Success of Low-Income and First Generation College Students in Private Colleges of China

Abstract

By Yinghui Chen

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2019

In China, low-income and first generation college students in private institutions are faced with adversities which undermine their educational outcome. Since the previous researches are mainly deficit-focused, the researcher conducted an investigation which put emphasis on the students' successful educational outcome in order to round out the knowledge of this problem. The researcher employed a qualitative multiple case study to explore how three students accomplished educational resilience despite their hardships. The researcher findings suggested that: 1) Internal locus of control, career and academic planning, financial aids, job-related experience, and rational occupational aspiration contribute to students' educational success; 2) The primary risks that the low-income and first-generation college students undergo in private college are lack of social connection, psychological maladjustment and financial hardships; 3) The protective factors offset the risk and produce educational success; 4) The protective factors contribute to educational resilience by interacting one another. The findings have implications for national policy makers, college administrators and teachers. Future studies are suggested to include students of public institutions and explore the interaction between internal and external protective factors by conducting quantitative design.

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Chapter 1: Introduction

The differential outcomes in higher education among students from high- and low-income families hinder the possibility of upward social mobility (Walpole, 2007). Students of low socioeconomic status (SES) have higher likelihood of dropping out of school, lower rate of graduation from college, lower aspiration for graduate school, and they earn less income after graduation than their high-SES peers (Carter, 1999; Terenzini et al., 2001; Walpole, 2003; Horn, 2006; Ishitani, 2006). Researchers criticize higher education for failing to achieve goals relative to opportunity equality, instead reinforcing socio-cultural outcome disparities related to economic status (Haveman & Smeeding, 2007; Zhu, 2009).

In China, the population of low-income college students is large and the students' experiences and outcomes are rather disturbing. By 2015, low-income students in college have surpassed six million (Ministry of Education, 2015). In Shanghai alone, 89,943 out of 512, 687 students are identified low-income, approximately 20% of the total college student population (Shanghai Government, 2012). Students from low-SES backgrounds tend to enroll in lower tier institutions, such as three-or two-year colleges and private institutions (Zhu, 2009). At the same time, their rate of acceptance in selective public universities has decreased dramatically (Deng, 2012; Zhu, 2009). One reason for this is that students of lower SES perform poorly on the College Entrance Examination (CEE) because of the disadvantageous quality of their primary and secondary education and biased enrollment policies that top tier universities tend to adopt (Deng, 2012). For example, in 2009, Beijing University, the most prestigious university in the liberal arts, enrolled an average of 66.9 students per every 10,000 students in Beijing, but in Shandong Province only 2.2 per every

10,000 students can have opportunity to get access to Beijing University. In addition, the lower level of performance on the CEE serves to prevent low-income students from entering favorable majors which prepare students for higher status professions (Yang, 2006).

Although a multitude of research indicates that low-income students experience a number of hardships while in college, such as inferiority complex (Li, 2010), maladjustment to college study (Wang, 2008), and inadequate financial aid program (Li, 2010), dropping out or interruptions in their studies seldom happens. Since Chinese culture highly values education, students and parents spare no effort to earn a college diploma once enrolled regardless of the economic hardships (Zhu, 2009). Arduous perseverance cannot guarantee satisfactory results. Considerable numbers of low SES students cannot be employed immediately after graduation or only have access to jobs with lower salaries and less security. For example, a survey conducted in 2006 in the Qinghai Province of China shows that 66% of low-income college students graduated during 2000-2005 was unemployed at the time of the survey (Zhu, 2009). The investigations of Lian (2008, 2009) reveal that merely in Beijing a population of 10,000 graduates who earn income lower than local average level within five years after graduation, and 89.2% of them are from low-SES families. The surveys in other cities, such as Shanghai and Wuhan, have similar findings (Li, 2011; Yao & Qu, 2010). These graduates live in poor conditions and financially depend on parents (Lian, 2008; Wen &Yue, 2013). For the low-SES students, achieving higher education the college students seemingly gains opportunity for higher social status than their parents have, but actually they just change their poor condition from one type to another (Wen & Yue, 2013). Such disappointing outcomes not only discourage students and parents from pursuing a higher education, but also serve to impede social justice in China (Wu, 2012; Zhu, 2009).

As mentioned above, Chinese private colleges provide an alternative for disadvantaged students. However, this choice makes them exploited by high tuition and bleak employment (Bao, 2013). Chinese private colleges—labeled as third-tier institutions—are funded and operated by nongovernmental institutions, organizations and individuals (China's Education, 2009). These colleges usually have fewer financial resources and mainly depend on tuition as revenue (Zheng, 1995). Compared with their public counterparts, private colleges have less recognition among students, parents, and employers (Ye, 2011). These colleges enroll students with lower CEE scores and charge fees two or three times higher than those charged by public institutions, and yet their graduates are in unfavorable positions relative to employment and longer term life opportunities (Mao, 2007).

Statement of the Problem

In China, the educational outcome and experience of low-income students in college have caught the attention of both researchers and the government (Xu, 2005). With increasing low-income students flowing in private colleges, although the low-income students in private institutions face more risks and reduced job prospects, serious investigation into their educational experience rarely occurs. While limited existing research asserts they experienced more risks, the deep and vigorous investigation is rare. A majority of the previous research is mainly based on students in public universities and deficit-oriented. The existing study generally draws the conclusion that low-income students are somehow less competent in dealing with extracurricular activities (Wang, 2008), suffer higher levels of anxiety (Zhang, 2000), experience more problems in establishing and maintaining interpersonal relationships (Jiang, 2005; Liu, 2003), and have lower academic performance (Wang, 2008). It is still unknown about the population's experience in context of private institutions. By exploring the low-income students' experience in private colleges, researchers would have a better understanding about this population at large. The school policy makers can put forward powerful strategies to promote students' educational outcome, enhance their satisfaction and recruit more underrepresented students to their campus. For the government, which expects adequate talents of higher education and attaches great importance to increasing the upward mobility of disadvantaged population, it could have reference for aiding policies. More importantly, higher education is widely seen as a means of social mobility and justice. If low-income students can not improve their living condition after years of effort, they will lose trust and confidence, which could cause great social conflicts and crises (Lian, 2015).

Various perspectives can be used to explore the achievement disparity in education, and most of them focus on either failure or success (Morales, 2010). Emphasizing the latter, resiliency theory involves highlighting achievement by overcoming barriers. In addition, the research on resilience often assumes that useful strategies mitigating achievement gaps can be acquired by in-depth understanding of what constitutes success (Gardynik & McDonald, 2005). Although rare, research finds that there are still some low-income colleges students survive and achieve excellent academic performance and career success (Song, 2007). Given that the existing research on low-income students in China tends to be deficit-focused, the findings derived from studying that nature of success may serve to round out the knowledge of this problem. Resiliency theory is discussed below from the standpoint of how it is used in the current study.

Theoretical Framework

Masten (2001) defines resilience in the following way, "a class of phenomena characterized by good outcomes in spite of serious threats to adaptation or development" (p.228). This construct reveals two key dimensions: (1) the exposure to adversity, and, (2) the positive potential outcomes of adaption (Luthar & Cicchetti, 2000). Specifically, resilience cannot be measured without being exposed to a circumstance threatening to some expected and/or desired outcome (Masten, 2001). Resilience takes place when the individual has achieved a quality development or adaption. Resilience does not imply that the individual cannot be hurt by hardships, but refers to the fact that one can recover from damages or harm (Zimmerman & Arunkumar, 1994). Significant success is not the only criterion for resilience; sometimes the absence of trauma or maladjustment is also an appropriate indication of the condition (Rutter, 1999). For example, a person may live without psychiatric problems after experiencing war. However, with ever-changing living environments, people surviving one risky situation may not succeed as well in different stages of life or different domains of life. Resilience is not, then, a fixed attribute people can achieve (Zimmerman & Arunkumar, 1994). Resilience researchers strive for an understanding of the process through which positive outcomes are obtained (Masten, 2001), and they typically begin with identifying the risks that could result in a bad outcome and then any protective factors that could serve to offset negative effects (Luthar & Cicchetti, 2000). Hence, the assessment and analysis of both risks and protective factors are essential components of resilience theory.

The risk factors and one's vulnerability relative to them, often lead to these terms being used interchangeably, highlighting individual characteristics and referring to things potentially causing distress and potentially harmful outcomes (Johnson &Wiechelt, 2004). Risk factors can include status (Mastern, 2001). For example, low socioeconomic status, or a critical event, such as death of important family member, can constitute risks that could negatively impact one's ability to act with resilience. It should be noted that research findings indicate that negative outcomes are likely to result from multiple risk factors (Johnson & Wiechelt, 2004). For example, children with either lower birth weight *or* the experience of being raised in poverty were likely to have higher intelligence; however, children hindered by *both* these two factors were likely to have lower intelligence (Werner, 1989). In addition, risk factors are context-specific. A risk factor defined within a specific cultural context may not result in a similarly harmful consequence if it were to occur in a different cultural setting. Therefore, to identify whether a particular variable as a risk factor or not should hinge on the effect it causes in any given cultural situation (Luthar & Cicchetti, 2000).

A protective factor is something offsetting the negative influence of risk and protective factors can be both internal attributes such as locus of control, or external conditions like positive interpersonal relationships (Luthar & Cicchetti, 2000). Just as risk factors often function in a cumulative manner, protective factors tend to affect individuals in a similar way (Howard, Dryden & Johnson, 1999). For example, Morales (2010) depicts how "caring school personnel" facilitate low-SES urban students of color getting access to college and achieving academic success there together with experiencing other protective factors, such as high self-esteem. In other words, the more protective factors the individuals display, the more likely they are to overcome risks and achieve accomplishments. However, a particular protective factor that leads to positive outcome for one individual in one situation may not secure similar outcome for another in the similar situation or even the same individual in a different situation (Howard, Dryden & Johnson, 1999).

Both risk factors and protective factors can be the result of the environment, the individual's own personality or psyche, the family, and/or the community setting (Luthar & Cicchetti, 2000). The research on risk factors and protective factors form a large body of literature. However, factor identification is just the initial phase as researchers also need to explore the processes through which both types of factors function (Luthar & Cicchetti, 2000). When evidence is accumulated in existing studies proving that some construct or situational context was responsible for an outcome, for example, some particular at-risk individual or group in a specific context, the researcher will typically use both theoretical and empirical evidence to depict the process as to how resilience comes into being (Luthar, Cicchetti & Becker, 2000).

In this study, the theoretical framework described above is used to review the process through which low-income private college students accomplished in spite of adversities. I discussed both risk factors and protective factors, but I centered my study on protective factors in order to explore the mechanism of protection. In addition, I framed the existing research in the following literature review by using the construct of resilience as an organizational structure through which to discuss protection and related barriers.

Purpose of the Study

The purpose of this study is to explore how low-income and first generation college students from Chinese private colleges achieve academic excellence and career preparation.

Research Questions

Two research questions guided this inquiry:

1. What do the low-income and first generation college students perceive that contribute to their educational success?

2. How do risk and protective factors influence the low-income and first generation college students' perceived contributions to their educational outcomes?

Significance of the Study

Investigation into success of an underrepresented segment of the Chinese college population can enrich the knowledge about this population and inspire further research regarding the nature and value of diversity among Chinese college students. For the policymakers in private colleges, understanding of low-income and first generation college students who gain educational success provides reference points for supportive policy for low-income students, which benefits the colleges in return. According to Ministry of Education (2011), if graduates of a given major at a college or university have an employment rate lower than 60% for two years in a row, the major will be required to close. Private colleges financially depend on students' tuition, and a decrease in student enrollment would be destructive. Low-income students make up the majority of unemployed and poorly employed graduates, and specific and effective policy improving students' educational outcome would facilitate private colleges' survival. In addition, the understanding of low-income students' educational success may influence effective policies safeguarding social stability (Sun, 2010). Yu (2010) points out that if the underrepresented students can not change their living condition after years of efforts their despair may probably turn into hatred to the society. For the nation's development, National Medium and Long-Term Plan for Education Reform and Development (2010) stipulates that the task of higher education is to provide talents and intellects for the national development in order to increase the global competitiveness of nation.

Description of the Study

This case study took place in one private college in Shanghai, China. Three college students in their senior year were selected as research participants. Data collection was conducted from October to November in 2018.

Summary

Low-income students in private college are an at-risk population in China. After completing their programs, they account for the majority of unemployed or poorly employed college graduates and the scholars predict that this population is growing larger without effective solutions (Wen & Yue, 2013). Previous research on students from low-income families in higher education is mainly focused on the public intuitions and deficit-oriented, although research shows some students succeed despite adversity. To understand the success of low-income and first generation college students in private colleges, resiliency theory is adopted in an effort to probe the nature of the low-income students' college experience. Hence, the following chapter will present a review of the literature regarding challenges and impetus the low-income students face in the private colleges of China.

Essential Definitions

Educational success: This refers to (1) excellent academic performance in college; (2) graduation from private college; and, (3) perceived career preparation

First generation college students: First generation college students (FGS) refer to students whose parents with education no more than high school (Pascarella et al., 2004).

Low-income college students: The identification of low-income students is not unified in the different provinces of China due to different levels of economic development. However, every college and university is required to issue its own identification procedure and standard for “low-income” students as related to local socioeconomic conditions generally. The uniform guiding policy was released in 2007 by the Chinese Ministry of Education and holds that local standards relative to the poverty line are key determinants, along with issues and phenomena such as natural disasters, severe disease of family members, unemployment of family members, status as an orphan, and other potentially unfavorable factors. Taking Shanghai for example, the poverty line in 2015 is 1580 Yuan (Roughly 243 U. S. dollars in terms of the latest exchange rate) per month per person for city residents (Shanghai Civil Affair Bureau, 2015). The low-income student identification is mainly based on official documentation of income level provided by the local government and considering other difficult conditions such as those mentioned above. In this study, the sample of participants consists of the college students who are identified by their colleges as conforming to the poverty line set forth in the current year.

Chapter 2: Literature Review

The purpose of this chapter is to locate the gap of previous study in order to focus the current research and to set up reference for discussion of research findings. I mainly borrow from western theories and research, which are richer and more systematic, to contrast with Chinese studies in order to see if the concepts and theories fit into the Chinese context.

This chapter consists of five sections. The first two sections outline the low-income, first generation college students' experiences in relation to educational outcomes in higher education: campus involvement, career choice, persistence, post-graduate educational aspiration, academic learning and occupational status. Chinese students go through similar hardships as U.S. students aside from the academic learning, persistence and education aspiration. Section three reviews resilience theory, educational resilience and how they are used in this research, focusing on the educational resilience of low-income and first generation college students and the criteria to measure the resilience of students. Two essential components of resilience, risk factors and protective factors identified in previous research are illustrated in sections four and five. Finally, I discuss the focus of the current research on the protective factors which contribute to low-income students' educational outcome in China.

Low-income College Students' College Experience and Outcome

Being a low-income student often predicates disadvantages in both college experience and outcome. This section discusses social involvement, major choice, persistence, educational aspiration, and income after graduation. The research on college access is not reviewed here because it is not the focus of this study.

Campus involvement. Astin (1984) assumes high levels of academic and social involvement with faculty and other students can lead to students' more active involvement in academic and social activities, and increased persistence, aspirations, and attainment. Tino's (1993) work also highlights how students' integration into campus community facilitates their persistence and eventual achievement. Studies reveal that students of low-socioeconomic status (SES) get less involved in campus activities (Terenzini et al., 2001; Paulsen & St. John, 2002; Walpole, 2003; Arzy, Davies & Harbour, 2006; Titus, 2006). Declaring SES is a salient force in students' out-of-class experience, the investigation of Terenzini et al. (2001) suggests students of low-SES have significantly lower involvement with peer students and in clubs and organizations, and use recreational facilities less often. Walpole (2003) finds that students of all SES stratum report out-of-class interaction with faculty, but low-SES students communicate with faculty in academic activities while the high-SES students spend more time in faculty's homes. Moreover, Walpole points out that the students of low SES achieve a lower Grade Point Average (GPA).

Low-income students prefer academic learning to social involvement (Arzy et al., 2006). Although students attach importance to campus involvement, they report discomfort when they get along with peers. Low-income students exhibit a lower level of interpersonal communication than the general student population (Liu, 2003; Lu, 2005). Liu (2003) finds that 80% of impoverished students are from undeveloped rural areas, leading to remarkable changes in living style, learning methods, and cultural environment in college. The maladjustment to these changes causes their obstruction in new relation establishment. The survey shows that the low-income students' interpersonal communication skills are lower than general college students, because they prefer to give up activities they cannot afford financially and save time for part-time job and learning, which impedes their involvement in social activity with classmates.

Choice of major. The students of low-SES exhibit distinct characteristics in choosing major, which contributes to their lower occupational placement in future. Goyette and Mullen (2006) identify the low-SES students prefer vocational field to liberal arts and science fields when choosing major. The early earning levels after graduation are not significantly different, but the arts and science majors are more likely to pursue graduate degrees (Goyette &Mullen, 2006). For example, Ph.D. and first-professional degrees are positively related with occupations of high earning and status. Aside from financial reward, the value of vocational curriculum is more occupation-oriented, while the A&S majors are trained general skills and accumulating cultural capital. The cultural capital together with a degree from a selective institution not only facilitates A&S students to enter prestigious careers but also participate in exclusive social networks (Goyette &Mullen, 2006). Thus, in the long run, the low-SES vocational majors will have weaker positions in labor market and social strata than their high-SES arts and science counterparts. Chinese low-income students, they are more likely to study majors requiring lower matriculation grade but being connected with less job opportunity in future (Cao,2013; Deng, 2012; Wang & Gu, 2005). The reasons are: 1) most of low-income college student are first generation, which make them lack knowledge on major choice; 2) the disadvantage in matriculation score limits the student's choice; and, 3) the low-income student tend to apply for less competitive majors to secure the access to college.

Persistence. Persistence is the premise of other outcomes of college (Walpole, 2007), and the students in challenging economic status exhibit lower odds of persistence (Anderson & Hearn, 1992; Terenzini et al., 2001; Titus, 2006). Paulsen and St. John (2002) find tuition and financial resources have a more significant effect on low-income students' decision to finish their college education. Low tuition is a major consideration of college choice and low-income students have lower persistence rate when tuition increases. Inadequate financial aid, from both grants and loans, is also a factor contributing to attrition of low-income students. From the perspective of institution, researchers (Anderson & Hearn, 1992; Horn, 2006) discovered that selectivity of college is positively associated with graduation rate of low-income students. Specifically, when the selectivity of an institution decreases, the proportion of low-income student increases and the graduation rate falls. Chinese low-income students tend to enroll in nonselective institutions, for example, private colleges. Chinese private colleges depend financially on students' tuition. Although prior research on students' persistence is rare, research on dropouts in a private college reveals that poverty ranked the sixth in the six main reasons the students leave college (Chen & Li, 2010). Chen and Li (2010) explain that the cost of college is often as much as the income of parents over lifetime. Their students may gain access to college by borrowing money from their relatives, which makes them less likely to quit but expecting to pay the debt by finding job higher payment after graduation.

Post-graduate educational aspiration. Financial difficulty hinders the post-graduate educational aspirations of undergraduates with low-SES backgrounds (Li, Li & Zong, 2007; Lv, 2007; Paulsen & St. John, 2002, Walpole, 2003). Walpole (2003) finds high SES and selectivity of college could enhance the possibility of graduate attendance. For the students from low-SES households, only the selectivity fails to positively affect the odds of graduate school, and being enrolled in a public university insignificantly decreases the possibility (Walpole, 2003). The variables boosting graduate school attendance of low SES students are: involvement in professor's research, out-of-class communication with faculty, sports participation, and college GPA (Walpole, 2003). The Chinese investigation confirms most of Walpole's conclusion. Li, Li, and Zong (2007) surveyed undergraduates of two public universities in west of China. The financial resource, education of parents, type of university, academic standing and paid work are identified as predictors of educational aspiration. Concretely, students with less financial resources, with parents of less education, less selective and research intensive university, lower academic performance and English proficiency (English is a main subject in Graduate Entrance Exam), and more paid work less tend to pursue postgraduate education. Li's study (1993) had the opposite finding. The low-income students in graduate school account for the highest proportion of all Master's degree students. Students report they assume the Master degree would facilitate their employment after graduation, while they do not have enough financial and interpersonal resource to find jobs (Li, 1993).

Academic learning outcome. The outcome of academic learning mainly refers to academic grade and cognitive skills, and the findings are entirely distinct between U.S. and China. The research of U.S. shows the generally similar academic outcomes in low-SES students and their high-SES counterparts ones (Pascarella et al., 2004; Terenzini et al., 1996; Terenzini et al., 2001). For example, Terenzini et al. (2001) examine the grades, academic and intellectual skills and report that the difference in terms of SES is insignificant. Chinese researchers are inclined to believe that low-income students make less academic achievement than general students because they cannot guarantee study time and spend more time on part-time jobs (Pang, Fu & Han, 2004). Poor students from underdeveloped areas with limited educational resources are not familiar with learning independently and report more difficulties in academic learning (Wang, 2008).

Occupational status. The students' socioeconomic status (SES) is positively related to income and occupational status after graduation (Anderson & Hearn, 1992; Bowels & Gintis, 2002; Goyette & Mullen, 2006; Perna, 2005; Walpole, 2003; Yang &Wu, 2009). Individuals from higher income families report the highest earnings compared to students from other groups (Bowels & Gintis, 2002; Perna, 2005). Furthermore, Bowels and Gintis (2002) assert the strong link between family wealth and intergenerational status. Chinese researchers claim that low-income undergraduates are most vulnerable population in college, undergoing the most risk in higher education because of the unfavorable occupational status after graduation (Yang & Wu, 2009). First, to guarantee the college admission, Chinese low-income students have to apply for the less competitive majors, which make students less employable or choose jobs of lower wage and poor security. Second, the parents of high social status have more power and guidance to facilitate their children being employed, which makes low-income students less competitive in job market. However, some researchers' findings (Jenks et al., 1979; Youn, Arnold & Salkever, 1999) do not support this disparity, and they do not find a gap in income or status. Goyette and Mullen (2006) indicate the disparity does not initially emerge. As mentioned earlier, the low-SES student who tend to major in vocational fields are more likely to work fulltime five years after graduation while their high-SES peers majoring liberal arts fields are more likely to achieve higher degree. The former earns slightly more than the latter in short term, but in the long run, the postgraduate educational experience could bring the latter higher payment and status.

Generally, the factor of low-income indicates how these college students experience risk throughout higher education from academic learning to social life. In China, low-income college students tend to choose unfavorable majors as a result of lacking social capital and disadvantageous prior preparation; the issue of persistence is not a significant problem in the low-income population; the pursuit of post-graduate education could be strategy of mitigating employment risk; and, they achieve lower in academic performance and experience more learning difficulties than their wealthy peers. Since the majority of low-income students in China have no parent who has college education, and there is no equivalent concept in China, I use the term "first generation" to describe this feature. In this study, first generation college students (FGS) refer to students whose parents with education no more than high school (Pascarella et al., 2004).

First Generation Students' College Experience and Outcome

Campus involvement. Generally, FGS are less successful integrating college experiences than their traditional peers with at least one parent who graduated from college. Specifically, FGS have lower involvement in social activity (Lohfink & Paulsen, 2005; Pike & Kuh, 2005), academic engagement (Pike & Kuh, 2005), peer interaction (Trenzini et al., 1996), and less communication with faculty and staff (Trenzini et al., 1996). The absence in these activities is a great loss for FGS (Filkins & Doyle, 2002; Lohfink & Paulsen, 2005;

Pascarella et al., 2003, 2004; Terenzini et al., 1996). The favorable function of extracurricular involvement in college students' intellectual and personal development has much evidence. For example, Pascarella et al (2004) claim that extracurricular activities significantly help FGS in degree expectation, critical thinking, and internal locus of control than the traditional students. Peer support is one of the significant predictors of GPA (Dennis et al., 2005). But, FGS engage less often in campus involvement and out-of-class peer communication as a result of being more likely to work and live off campus. In addition, Pike and Kuh (2005) find FGS report less perception of support from college environment and intellectual development which are caused by students' lower educational aspiration and living off campus. The reason that FGS are less engaged on campus is they and their parents have no knowledge about the importance of the college experience and how to get involved (Pascarella et al., 2004; Pike & Kuh, 2005). Lohfink and Paulsen (2005) highlight that the participation in academic activity, such as student-faculty interaction, benefits FGS in persistence more than social activity, such as club participation. FGS need reaffirmation from faculty that they are qualified and competent learners (Lohfink & Paulsen, 2005).

Choice of major. Deciding on a college major is challenging, especially for FGS, because their parents offer them less guidance (Chen &Carroll, 2005); however, related investigation in China depicts the situation a little differently. Compared with students whose parents have Bachelor's or higher degrees, FGS are more uncertain about their major choice after entering college. In addition, the poor prior preparation deters FGS from choosing majors in fields of high skills, such as mathematics and science and they less prefer the majors they assume will bring less financial return. For example, the most popular major for FGS is business. As mentioned before, the competition for favorable major is part of enrollment of college in China. Research shows that both parents' educational level and occupational status influence students' major choice and access opportunity (Zhang, 2012; Zhu, 2011). However, for the FGS whose parents work in higher income occupations, such as political power, students can still enroll in majors predicating good jobs even with lower grade of matriculation (Zhu, 2011). For the students without a parent who graduated from college or a high status job, the study shows they are more likely to study in less popular and competitive majors. Except for lacking knowledge and guidance in major choice, the students lack social capital and other opportunity for employment aside from higher education, so to guarantee access, choosing less competitive majors is one coping strategy (Cao, 2013;Wang & Gu, 2005).

Academic performance. Academic performance in first year is positively linked with degree attainment (McCormic, 1999), while the FGS achieve lower GPA than their peers throughout the whole enrollment (Chen &Carroll, 2005; Pascarella et al., 2004). For example, the FGS finished fewer credit hours because they worked more hours (Pascarella et al., 2004). Researchers have attested that the academic preparation before college accounts for this result (Engle & Tinto, 2008). FGS take a less rigorous high school curriculum which is vigorous preparation for college study; skills in time management and self-efficacy in academic learning are less developed; encounter more difficulty in academic life because of lacking college exposure (Cabrera et al., 2001; Chen, 2005; Lohfink & Paulson, 2005; Nunez &Cuccaro-Alamin, 1998; Terenzini et al., 1996, 2001). Engle and Tinto (2008) emphasize that the prior preparation is the dominant factor in FGS's academic outcome in college. Consequently, FGS are more likely to demonstrate low academic performance, which significantly relates to their persistence in postsecondary education. In China, students' mother's education is found to positively affect students' academic performance, because the mother takes the main responsibility in children's upraising (Chai, 2011; Lu et al., 2000). In addition, Bao (2013) highlights that the gap between education resources that FGS and non-FGS get before college is wide. For instance, the non-FGS family tends to have more private supplementary tutoring while the FGS have none or little extra-curricular tutoring since the parents have little knowledge about its importance.

Persistence and degree completion. The educational level of parents influences students' retention in college and the FGS has lower retention and degree completion than traditional counterparts (Chen & Carroll, 2005; Choy, 2001; Ishitani, 2006; Nunez & Cuccaro-Alamin, 1998). Ishitani (2006) finds that the parents 'education affects undergraduate students' persistence and the low-income family could exacerbate attrition (Ishitani, 2006; Paulsen, 2005). The traits of the institution are closely connected with FGS's persistence. For instance, the selectivity of institution could largely decrease students' attrition and enhance the degree completion (Pascrella et al., 2004). Ishitani (2006) claims that FGS in public institutions are more likely to drop out as compared with the ones in private schools. However, it is not so simple. Paulsen (2005) finds that attendance in private institutions is negatively related to FGS's persistence, but the size of the institution can positively influence the persistence. Paulsen (2005) gives three possible reasons: 1) the high cost of a private institution causes financial burden on the FGS; 2) the effect of peer pressure from wealthier students adds to the financial pressure; and 3) living on campus disconnects FGS' network supports from family while the activities in school are more designed for traditional peers.

As for the size of institution, the large ones have more resource targeting the FGS, which could promote their involvement and persistence. Given that the continuous enrollment has the greatest impact on degree completion, the disadvantage in persistence not surprisingly leads to the unfavorable degree completion. The rate of degree attainment in FGS is lower than the non-FGS (Chen & Carroll, 2005; Choy, 2001; Ishitani, 2006). The odds are lower when it goes to the low-income FGSs. Engle and Tinto (2008) find that low-income FGS often leave college in the first year and only 11% of them earned a degree in six years.

Career outcome. The FGS seemingly undergoes equivalent opportunity in career development (Choy, 2001; Nunez & Cuccaro-Alamin, 1998), while Chinese researchers are concerned that the gap in educational opportunity continues in career development. Nunez and Cuccaro-Alamin (1998) found that as long as the FGS received a certificate or degree, there is no difference in employment rates and income between FGS and non-FGS. Moreover, the FGS tend to work in fields related to their education majors. Choy (2001) states that the salary is a result of several factors (i.e., major, sex, GPA, and type of institution), not just of parents' education. However, FGS has a strong influence on graduate enrollment (Choy, 2001). Chinese research indicates the difference in career outcome happens immediately after graduation. Wen (2005) investigates connection between the father's education and undergraduate's job opportunity and found that the students whose fathers have higher education have a higher starting salary. Xuan (2009) proves that the father who has been to college is more likely to participate in school activity of his children, communicate more with faculty, and exert more influence in job-seeking. Accordingly, the child tends to expect and obtain a job with a higher income. Zheng (2012) argues that the parents with higher educational experience can infuse children occupational values; the children have more confidence in job-seeking process and career promotion; and, parents' social relationships can provide students with more job chances.

The influence of first-generation status has similarities with that of low socio-economic status in relation to students' college experience and outcome. FGS tend to predict less benefit from campus life, lower academic performance (Chen &Carroll, 2005; Pascarella et al., 2004), longer time to graduate and gain degree (Chen & Carroll, 2005; Choy, 2001; Ishitani, 2006), and fewer prospects in career (Wen, 2005; Xuan, 2009; Zheng2012). For the Chinese FGS, the main barriers concentrate on major choice, academic achievements, and career prospect. Yet, not all individuals fail to attain satisfactory educational outcome due to disadvantaged background (Schoon et al., 2004). Studies in many different cultural settings have unraveled that some people can always reach positive adaption in adversity, and researchers describe this phenomenon as "resilience" (Luthar, Cicchetti, & Becker, 2000; Masten, Best & Garmezy, 1990). The following section discusses resilience theory and the educational resilience of Chinese low-income college students.

Resilience Theory and Educational Resilience

Resilience research comes from dissatisfaction with the deficit model in 1950s (Howard et al, 1999). A deficit model focuses on the children's failure and the causes.

One problem with this model is identification often takes place after unsatisfactory performance comes into being, which makes effective intervention impossible (Levin, 1994). Resilience research allows the focus to be on individuals who have succeeded in face of adversity (Howard et al, 1999). The assumption embedded in resilience research is that by understanding factors related to success, useful strategies can be attained (Gardynik & Mcdonald, 2005). Based on studies with children at risk, Werner and Smith (1988) concluded that most children have the capacity to overcome adversity. Hence, resilience is to help the disadvantaged gain positive outcome in difficulties (Werner & Smith, 2001).

Highlighting strengths, the definition of resilience is “a class of phenomena characterized by good outcomes in spite of serious threats to adaptation or development” (Masten, 2001, p. 228). In other words, the adversity and the good outcome together make this construct. Successful outcome defines the adaptation in resilience (Zimmerman & Arunkumar, 1994). Researchers often use the outcome achieved by the majority of general population as a benchmark to measure whether youth are resilient or not (Hallett, 2012). The adversity refers to what undermines the adaption. Generally, the resilience research starts from adversity identification and defines the adaptation (Hallett, 2012).

Resilience researchers make efforts to identify risk and protective factors which construct the successful adaption and explain the process (Luthar & Cicchetti, 2000). Hence, risk and protective factors are two essential components of resilience research. A risk factor is something causing distress and harmful outcomes (Johnson &Wiechelt, 2004), while a protective factor offsets the possible negative influence and outcome of risk. For instance, poverty has been identified as a risk factor (Walpole, 2004). Protective factors can be internal attributes, such as locus of control, or external conditions, like positive interpersonal relationships (Luthar & Cicchetti, 2000). Both risk and protective factors are context-specific, and to identify a construct as either risk or protection, or both, hinges on the effect it makes in certain setting (Luthar & Cicchetti, 2000).

Poverty is a major barrier for children's development, such as physical health (Conger et al., 2010), mental health (McLoyd, 1998), and school performance (McLoyd, 1998; Schoon et al., 2004; Seccombe, 2000). Throughout the exploration of those who did not succumb to the poor condition, researchers using the resilience framework look for factors which buffer the effect of adversity and bring up suggestions for intervention (Luthar & Cicchetti, 2000). But, in these studies, the college population is seldom the research subject (Johnson, 2011).

In China, resilience research is relatively new (Pan & Yang, 2013), and researchers tend to define resilience as a psychological attribute. The previous research is mainly focused on: 1) developing assessment instruments. Since resilience research in China mostly refers to findings of foreign study, researchers propose it necessary to develop the resilience assessment to suit Chinese setting and behavioral pattern (Pan &Yang, 2013). 2) Evaluation of resilience and factors identification. Researchers apply evaluation tool in certain population to test people's resilience level and analyze the factors contributing to the high and poor level of resilience (Lei, Chen & Chen, 2008; Wang et al., 2010). As for the studies targeting the college students from low-income families, there are two limitations. One is the lacking of understanding how the protective factors work regarding the low-income students. The other one is that the research subject is limited to the students from mainstream institutions of higher education.

Resilience is a multidimensional construct, and an individual labeled as resilient is only based on a particular domain (Luthar, Cicchetti & Becker, 2000). People attained one sort of adaption in certain adversity may fail in other aspect. For example, Kaufman et al. (1994) find among children with mistreatment history, two thirds are assessed as academically resilient, while merely 21% are assessed as socially resilient. Therefore, Luthar, Cicchetti and Becker (2000) urge resilience researchers to define the outcome in specific domain. In this study, I focus on educational resilience, and following is its definition and benchmark for the intended investigation.

Educational resilience. Gayles (2005) defines educational resilience as "achievement when such achievement is rare for those facing similar circumstances or within a similar sociocultural context" (p.250). Wang et al. (1994) frame their definition in a more specific way: "the heightened likelihood of educational success despite personal vulnerabilities and adversities brought about by environmental conditions and experiences" (p. 46). These definitions provide guidance than an operational definition for actual study. In empirical study, researchers often specify their definition including academic success, such as degree attainment and college access. For example, Pan and Yi (2011) study the educational resilience of youth in Taiwan and use academic achievement, specifically access to college or graduate school, as a measure the youth's educational resilience. They justify this definition by focusing value on academic performance embedded in the culture.

In this dissertation, I define educational resilience as academic achievements and career preparation. The reasons are: 1) low-income college students are more likely to gain lower academic performance; 2) low-income college students in private college accounts for the majority of unemployed and poorly employed graduates. Hence, a resilient low-income college student from Chinese private college should: 1) achieve recognized academic performance in college; 2) graduation from a private college; and, 3) perceived career preparation.

The following sections discuss the risk factors and protective factors. In specific, I exhibit what have been found undermine or facilitate the educational outcome of low-income population in higher education. Although Chinese resilience research is still in the initial stage, studies from other countries support the decision to focus on the factors below. I explore how each factor works in the Chinese context.

Risk factors. Both Chinese and western researchers have shared findings about hardships that sabotage the low-income students' educational success, such as, low selectivity of institutions and cultural and social capital of lower class. However, in different settings, the identified risks pose negative effect on students in different manner.

Low selectivity of institutions. The selectivity of institutions positively influences students' persistence and aspirations (Anderson & Hearn, 1992; Horn, 2002). Yet, the proportion of low-income students who enroll in selective institutions is low (Perna&Titus, 2004; Terenzini, Cabrera, &Bernal, 2001; Zhu, 2009). In China, acceptance rates of low-income students in selective public universities have decreased dramatically, but private colleges became a main alternative (Deng, 2012; Zhu, 2009). Typically placing in lower strata of higher education system, Chinese private institutions bring two barriers for low-income students' career success. First, students with diplomas granted by private colleges have much lower recognition from employers and less employment opportunity, which deters students' upward mobility (Mao, 2007). Second, the private institutions are short of financial aid resources, which affects students' anxiety, poor academic performance, and likelihood of dropping out. Although the cost of Chinese private colleges is nearly twice that of the public ones, private institutions are not included in the national financial aid system (Zeng, 2013). Meanwhile, private colleges rarely receive financial social endowment (Zeng, 2013; Zhou, 2008). As a result, private institutions are able to provide limited financial support for students in need.

Cultural and social capital of lower class. Evidence shows that cultural capital, social capital and habitus have far-reaching effect on students' educational aspiration, persistence, and attainment throughout college and beyond (Horvat, 2001; McDonough, 1997; Walpole, 2003). Bourdieu (1994) uses cultural capital, social capital and habitus to explain how individuals reproduce social structures. Every social class has its own social and cultural capital to pass on from parents to children (Lamont & Lareau, 1988). Cultural capital is composed of insider knowledge of a certain class while social capital refers to the networking can be used for personal gains (Horvat, 2001). As for habitus, it is defined as the belief, attitude, and behavior pattern of individuals of a shared class and the influence on one's aspiration and practice (Dumais, 2002; Horvat, 2001). Students from low social class have lower levels of success in school because educators value the cultural capital of higher social status (Walpole, 2003). Habitus of the lower class may make students adopt strategy and behavior which results in less success (Walpole, 2003). For instance, lower SES college students tend to work more hours and study less, get less involved on campus, and prefer to work fulltime instead of going to graduate school. Such strategies are due, in part, to the habitus of low SES students and are less helpful in making social and economic profit out of higher education. In China, the following research supports this conclusion.

Lack of prior preparation for employment. A number of researchers have found that low-income students do not fully prepare for employment when they were about to graduate (Chen, 2012; Hou, 2009). The reasons are: 1) they have to spend considerable time on part-time employment, and they cannot guarantee adequate time for high academic performance; and, 2) low-income students are likely to decrease social activities and training programs for vocational certificate because they cannot afford the cost.

Pressure from family. Some researchers argue that the low-income students adopt unfavorable job-seeking strategies, which prevent them from being employed immediately after graduation (Chen, 2012; Hou, 2009). For example, some students have unrealistically high salary expectations. Low-income families tend to view higher education as the path to better life for whole family (Chen, 2012). In addition, to pay for the cost of education, families have to borrow money from the bank and relatives, and they also expect the children are able to have well-paid jobs after graduation so as to pay off the debt (Chen, 2012; Liu, Ding & Yuan, 2011).

Protective factors. Researchers of resilience tend to categorize protective factors into personal factors and environmental factors (Alva, 1991) or internal assets and external assets (Howard et al., 1999). Personal factors consist of the internal attributes and attitudes which resilient people use to overcome hardships and environmental factors refer to external support helping at-risk people out (Wayman, 2002). There have been quite a few personal protective factors identified by prior investigation, for example, locus of control, self-efficacy. External protective factors mainly derive from three primary systems: family, school and community (Howard et al, 1999).

Personal factors. Satisfaction with college (Gerardi, 2006), help-seeking strategies (Morales, 2012), internal locus of control (Borman&Overman, 2004; Morales, 2010; Morales, 2012), and career and personal motivation (Cote &Levine, 1997; Dennis et al., 2005) are related to students' success in college regardless of socioeconomic adversity. A high level of satisfaction with college experiences is one of indicators of positive academic performance of low-income college students (Gerardi, 2005). In his longitudinal study, Gerardi (2005) found that the low-income students who have higher level of satisfaction achieve higher GPA, more academic credit and more intellectual growth after graduation than students who have a lower level of satisfaction. The active help-seeking strategy predicts at-risk students' academic resilience in college (Morales & Trotman, 2011; Morales, 2008). Aside from practical help in academic attainment, the active help seekers can establish relationships with college faculty who can offer more help in future (Morales, 2012). In particular, the willingness and ability to gain help from college indicates that the students believe in their own action could influence the environment, which reflects an internal locus of control (Morales, 2012). The motivation to college from career and intellectual are connected with students' college adjustment and commitment (Dennis et al., 2005).

Education-centered Chinese culture. In Chinese traditional culture, education is the dominant value (Yi & Wu, 2004). Children cultivated in this culture are assessed by their academic performance and achievements, and doing well in school is a shared goal for whole family (Yi & Pan, 2011). The education-centered culture shapes the way children perceive themselves and others. Song (2008) notes that low-income college students believe that academic accomplishments are important for gaining respect from peers and recognition from teachers. For the impoverished families, children go to college is a significant event, because it is deemed an opportunity to change the whole family's life (Deng, 2012; Zhu, 2009). Therefore, the family will spare no effort to guarantee children's college education once they get enrolled regardless of the tremendous financial burden.

Student-faculty interaction. Many researchers report a positive effect of out-of-class student-faculty interactions on students' college experience and outcomes (Cox et al., 2010; Einarson & Clarkberg, 2004; Kuh & Hu, 2001a). The abundant empirical inquires cover a wide array of areas: academic achievements (Anaya & Cole, 2001; Pascarella et al., 1978), satisfaction with college (Astin, 1977; Kim & Sax, 2009), intellectual and personal development (Pascarella &Terenzini, 1978; Pascarella et al, 1983), persistence (Pascarella &Terenzini, 1979), graduate aspiration (Hathaway et al., 2002), and occupational decision (Cooper, Stewart & Gudykunst, 1982； Pascarella, 1984). Especially, more recent studies also confirm the effect of interaction is conditional (Pascarella, 2006). For instance, the type of college (Astin & Chang, 1995), the type of interaction (Ishiyama, 2002), and the socioeconomic status of students (Kim & Sax, 2009) predict different outcomes due to the communication.

The types of institution. As aforementioned, characteristics of institutional settings shape informal contact outside of the classroom, but there are few powerful explanations and supporting evidence (Einarson &Clarkberg, 2004). One consensus is faculty and students in small colleges have more informal contact (Kim & Sax, 2009; Kuh & Hu, 2001a). Kuh and Hu (2001a) reveal students in private institutions exhibit more informal contact with faculty than their public counterparts, and selectivity does not affect the contact significantly. The frequency and quality of contact negatively predicts the size of institution, but positively predicts students' satisfaction and gains. Research-oriented institutions are viewed as less encouraging informal interaction than other kinds of institutions, because they have large student-faculty ratio and an emphasis on research (Kim & Sax, 2009), while the teaching-oriented institutions value and reward informal contact more (Kuh & Hu, 2001b; Kuh & Vesper, 1997). Einarson and Clarkberg's (2004) study on research universities demonstrate the faculty has informal contact regardless of faculty's perception that the institutional culture does not encourage faculty to interact with student outside classroom. Faculty is more motivated intrinsically by personal value and belief.

Residential and commuting institutions exercise influence on students' interaction with faculty in different manner. A residential college is supposed to facilitate students socially and academically integrating into college and set up their sense of community. A study on a well-funded residential college which intentionally designed to foster meaningful student-faculty interaction exposes strikingly a shortage of this kind contact (Cox & Orehovec, 2007). Students from commuter institutional settings, unsurprisingly, have fewer academic and social conversations with faculty outside the classroom than residents (Pascarella et al., 1983). The commuting students are more likely to have in-class interactions about specific purposes related to course, but are less likely to meet with instructors out of class instead (Chang, 2005). However, residents and commuters benefit equally in intellectual and personal development from communication with faculty (Pascarella et al., 1983).

The socioeconomic status. Students of low SES similarly benefit from informal communication with faculty (Endo & Harpel, 1982; Kim & Sax, 2009), and the approach and outcome differ from their peers of high SES. Walpole (2003) indicates that although all students report informal contact with faculty, students of low SES tend to have more academic activities in more structured settings, such as research-related activities, while their high-SES peers are more likely to have contact in casual setting such as home visiting. The possible reason is that the low SES students have to work more hours.

The faculty advisement is valued as the strongest potential influence on college students' career aspirations (Southern Regional Educational Board, 1977). College students assessed their faculty members' influence on their development regarding interactions about intellectual and career problems (Pascarella, Terenzini & Hibel, 1978). The faculty members' experience in sharing educational and occupational history with students is an effective source of career aspiration for students (Cooper, Stewart & Gudykunst, 1982). Especially for the students of low SES, the culture capital is important for success of social mobility, and faculty members play crucial part in the students' cultural capital attainment (Morales, 2010). In possession of culture capital, the interaction with faculty members on academic and career goal makes the academic and cultural setting easily acceptable for students of low-SES (Morales, 2010).

Kim and Sax (2009) report that interactions predict higher college GPA and degree aspirations for all students regardless of SES and first generation status, except the low-SES students do not have gains in critical thinking and communication. As for the purpose of assisting faculty research, the lower SES students are more likely to do it for payment while the high SES peers are likely to get involved for course credit. Concerning the manner, lower class students tend to communicate with faculty during class session while their high class peers do it more in more one-on-one manner, such as by email or in person. The FGS is less likely to participate in faculty research for course credit and communicate with faculty in one-on-one fashion than their traditional peers. Unsurprisingly, the low-SES and FGS report lower level of satisfaction with the interaction.

Generally, scholars agree that the low-income and first generation college students are an underrepresented population in higher education. The research on risk and protection to the students' educational outcome is rich. However, when it comes to the students' career development, the study from the U.S. on protection is pretty rare. Moreover, the deficit-oriented Chinese research makes it short of knowledge on protection. In other words, it is still unknown what makes the low-income students of private college in China overcome obstacles and achieve academic and career success. Therefore, this investigation was designed to explore the protective factors in order to help set up supportive policy.

Chapter 3: Methodology

In Chapter 1, the research problem has been stated and Chapter 2 a review of the literature was presented with what this study can contribute to the wealth of knowledge in this area and the purpose of this inquiry. In Chapter 3, I seek to reveal the logical process of collection, analysis and interpretation of data. The rationale for the multiple case study and the specific steps for its implementation are presented and explained below. This chapter also discloses the biases, strategies for the mitigation of these biases and explains the core assumptions underlying the study. Limitations inherent in the design, methodology and research approach are also discussed from the standpoint of possible follow-up research.

The Qualitative Design and Rationale for the Study

Patton (2002) concludes that all research designs are affected by the intended purpose, expected use and targeted audience of the study. Qualitative research can empower individual voice, identify immeasurable variables, and seek for understanding of complex issues (Creswell, 2013). Accordingly, in this research, a qualitative design is used to fulfill three purposes. First, the voices of low-income college students in China need be heard. In Chapter 1 and Chapter 2, I have explained that knowledge about low-income students' educational experience in private colleges is limited, although research implies they face more adversity than their counterparts from public institutions. Among the previous studies, few qualitative designs allow students to depict their college experience. Second, the current research explores what and how protective factors affect students' educational outcome. Third, when I frame my problem in the Chinese context and further the current study to students' initial career development, it is necessary to obtain rich information about how the identified factors work. The identification of factors relies on the effect of each factor and varies in different context. A number of protective factors in students' college persistence have been proved in western researches. However, resiliency study is still rare in China.

Guiding Research Questions

Two research questions guided this inquiry:

1. What do the low-income and first generation college students perceive that contribute to their educational success?

2. How do risk and protective factors influence the low-income and first generation college students' perceived contributions to their educational outcomes?

Specific Research Design

This research is a multiple case study. Case study is a research strategy highlighting context of problem and coping with problem of complexity (Yin, 2003). The definition of case study is "a case study is an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (p.13). In other words, a case study is appropriate when the researcher needs knowledge of context which is also critical to understanding the problem. Context is a key factor for the intended inquiry for two reasons. First, as mentioned in Chapter 1, previous research in China on the low-income college students is based on the public institutions. The Chinese private college is the new context for the intended inquiry. I choose high-achieving low-income students as cases in order that the in-depth exploration of their success can provide reference for developing helping strategies for others of the low-income population. Second, resiliency research is rare in

China, and factors framing resiliency are context-specific. Rich explanation about context is key to drawing correct conclusions. Specifically, a multiple-case study is used for two reasons. First, the evidence and findings from multiple cases are viewed as more informative and rigorous (Yin, 2003). Second, different perspectives are expected to be found among a number of different case scenarios.

Participants Selection Strategy

Qualitative inquiry is not generalizable to a target population; rather it is oriented toward the development in-depth exploration of experience and the recording of thick description regarding the context of that experience (Patton, 2002). To best understand this experience, “the qualitative researcher purposefully or intentionally selects individuals and sites” (Creswell, 2008, p. 206). Therefore, purposeful sampling is employed to find the high-achieving low-income students in private college. In addition, Patton (2002) suggests information-rich cases be selected, because only through these can one gain in-depth information to fulfill the purpose of the inquiry. To gain information-rich cases, I identify precise criteria for participant selection.

Inclusion criteria for case sampling are developed in relation to the research purpose of the study. In Chapter 2, I discussed the benchmark for educational success of low-income and first generation college students in Chinese private colleges: (1) achieve recognized academic performance in college; (2) degree completion without interruption; and, (3) perceived career preparation. To make the participants selection workable, I create inclusion criteria for appropriate participant :(1) low-income and first-generation; (2) study in private college without interruption; (3) the presence of demonstrable academic achievements (for example, GPA ranking top 20%); (4)interns with perceived career preparation; (5) have passed National Test of English Proficiency; and, (6)student of Han people. I set up requirement on language level because this interview was carried out in English. The students of high English level are attainable for two reasons. First, the college students in four-year programs, they must pass National Test of English Proficiency to achieve diploma. Second, because English grade accounts for considerable proportion in GPA, high GPA predicts outstanding English level. I only included student of Han people because the Han accounts for 91.61% of the Chinese population (National Bureau of Statistics of People's Republic of China, 2015) and the problem of students from minority ethnic groups is more complex and not the focus of this study. To meet these requirements, I recruited senior students because most of them have had work-related experience so that they have more evidence to assess their career preparedness.

I chose Newcomer College (pseudonym) as the site to find participants for the study since it was a private college providing a four-year program of study and I knew a colleague on staff there who helped me contact the gatekeeper (the administrator of Students Affair Office) and advisers of senior students. To facilitate my access to these persons, I submitted an introduction letter (see Appendix A) to explain the research project. I discussed with the students' advisors about the schedule when their students had class meeting, and after their meeting I did a 10-minute presentation. In the short presentation, I explained my research and leave my contact information so that the fit students could contact me. I prepared informed consent in both Chinese and English (see Appendix C and D), and I obtained signed copies before data collection.

The number of participants and selection strategies hinge on the unit of analysis under study, and the unit of analysis is, to some extent, decided by the form of analysis the researcher intends to employ (Patton, 2002). In other words, the research purpose is a primary determinant in selecting sampling strategies. Creswell (2013) identifies the unit of analysis in a case study as an “event, a program, an activity, or more than one individual” (p. 104). The central unit of analysis is the low-income and first-generation college student, because the study is driven by the purpose of understanding how the student achieves educational success.

The number of participants is not fixed for any particular inquiry, and there is always a trade-off between depth and breadth (Patton, 2002). The primary rule for deciding number of participants is considering the “research purpose, resource available, time available, and interests of those involved” (Patton, 2002, p.228). Creswell (2013) suggests no more than four or five cases in any given case study, because a large sample size in qualitative inquiries may prevent the researcher going in-depth and force him/her to adopt a superficial perspective. In an effort to balance depth and breath, three participants are realistic for the collection of varied data for analysis and interpretation. Finally, I interviewed three participants who contributed to the study.

Data Collection Procedure

Case study relies on thick evidence from various sources (Yin, 2003). The data were collected through interviews and documents. These various approaches were undertaken together for three reasons. First, multiple sources of data can create a holistic case; second, “by using a variety of sources and resources, the researcher can build on the strengths of each type of data collection while minimizing the weakness of any single approach" (Patton, 2002, p.307); and third, the various sources of data can be used to verify the information and conclusions emerging from each and, in this way, enhance the validity of findings (Patton, 2002).

Interviews. To interview people is to allow the researcher access to the interviewee's perspective and stories. In addition, interviewing is necessary when research refers to matters that have already taken place (Patton, 2002). Interviews using open-ended questions are especially powerful in that they allow the genuine voice of interviewees regarding their experiences to come through without being affected by previous research findings (Creswell, 2013). The open-ended interview questions are derived directly from the research questions so as to better address research questions and fulfill the purpose of the study. In addition, asking open-ended questions could minimize the imposition of ideas and responses on the interviewees by the researcher (Patton, 2002).

Semi-structured interviews were used to focus on research problems and data analysis. The interview protocol (see Appendix B) facilitated the process and provided a baseline regarding the data retrieved across all three participants. I emailed them a brief overview that the interview was about as a low-income first generation college student. Each participant was interviewed twice. The first interview last 60-90 minutes in order to attain their higher educational experience, such as, social networks, co-curricular activities, extracurricular involvement and work-related experience. Guided by my research questions, I reviewed the first interview and other supporting material, such as, documents, to locate risk and protective factors, and other ideas which need clarification. Therefore, the second interview targeted how factors worked. The site of the interviews was decided by the participants in order to maximize their convenience and comfort. In addition, a flash drive (worth about 100RMB) was provided to each student participant as a gift of thanks, and the gift was delicately packed and presented after the second interview.

I audio recorded and transcribed all interviews in person. During the interviews, I captured emerging questions and generated useful data. The body language and distinctive interaction habits of the participant were also be noted in order to assist the readers to visualize the actual scene and the interviewees. I also used a great deal of reflexive journal to keep track of my thinking and decision making process.

Patton (2002) indicates that interviewees could distort data because of their personal state of mind at the time of interview, and recall things erroneously, reactivity, or give self-serving responses. This poses a major risk of inaccuracy in the data. As a result, I employed additional different sources of data in order to minimize this hazard (e.g., documentation in support of the interview data.)

Documents. The documents directly provided information with which I corroborated the data from interview and enriched my knowledge on the students' college experience. To collect evidence fulfilling my research purpose, I sought documents on students' academic performance, co-curricular and extracurricular activities, and job-related records. Specifically, transcript, honor certificates, and job resume are my targets. Since my participants were seniors and they had had all these documents then, I asked for them from my participants directly. The job resume of student revealed all the achievements of college. Usually, student had different versions for varied job application. I used each participant's resume as the first document because of its three advantages. First, it was accessible but confidential. Second, it unfolded a sequential development of academic learning and extracurricular activities. I also used resume to verify students' achievements and work-related experience which the participants mentioned in interviews. Third, a resume was a list of indicators for potential documents. For example, because I found some activities looked very important (e.g., awards) in the resume, I requested further supporting documents so that I obtained extensive data. In other words, I used the resume as a profile of my student participant to develop more detailed story according to my research purpose.

Transcripts of the first three years in college can record the academic progress students made during college. In the senior year, students have finished all courses and seen unofficial transcripts on line, which made these documents accessible. This documentation is valuable because it can reveal the sequential development of academic learning. Honor certificates and other awards are easily recognizable evidence of comprehensive accomplishments. For example, certificates of National Encouragement scholarship are exclusive for students who have economic difficulties but attain well-rounded development. The honor certificates in extracurricular activity demonstrate students' involvement and progress. The information regarding timing of award on honor certificates provided a useful timeline with regard to the pace of the students' advancement. I requested all the target documents during the first interview.

Trustworthiness

Unlike quantitative designs evaluated entirely on the basis of validity and reliability, qualitative research is evaluated by different criteria and these are the subject of broad debate.

Creswell (2013) finds that terms and criteria (credibility, authenticity, transferability, dependability, and confirmability) coined by Lincoln and Guba (1985) are popular benchmarks for determining and ensuring the quality of qualitative research. Engagement in fieldwork and triangulation can ensure credibility while description of setting is used to make sure the findings of research are transferable between researchers and participants. By examining research processes, dependability and confirmability are expected to result. Among the various approaches and strategies of validation, researchers are urged to choose the types with which they feel comfortable (Creswell, 2012). Four strategies for ensuring the quality of the study will be used here.

Engagement in fieldwork is the prerequisite of quality research. No particular period of time can guarantee engagement and quality. The only meaningful criterion for engagement here is that adequate data has been collected upon which a holistic and real story can be built.

Triangulation is one of primary forms for validating qualitative accounts. By comparing and corroborating evidence from various channels and perspectives, I was able to examine the authenticity and accuracy of the various forms of data being collected. Furthermore, it also helped me constrain my personal perspective in data analysis and interpretation. In my study, the data from interviews were used as the main body of the story and data from documents were compared and contrasted with interview data. Inconsistency appeared at the time. Patton (2002) explains that this inconsistency is an opportunity for deeper insight into the researched subjects. I assessed the nature of inconsistency by looking for more evidence or contacting the participants for follow up as warranted. Meanwhile, document data served to support statements in the interview data and added new information and themes to the main body of the story. Creswell (2013) suggests theories and previous research from different investigators can also provide evidence for credibility and accuracy in a study's findings. Hence, the related findings from the literature review also served as an instrument for triangulation.

Thick description of the case and its setting helps my audience and reconstruct the story (Creswell, 2012). To achieve this goal, ample data from interviews and documents were presented richly in order to piece together a holistic picture of the physical and cultural environment in which my participants lived and studied, as well as the behavioral traits exhibited by my participants. Quotes were applied together with richly described situational data so as to help audience visualize the themes emerging naturally.

Data Analysis

I mainly employed the strategies suggested by Creswell (2012), and the whole data analysis process contained five steps: organizing data, coding the data, developing themes, representing and reporting findings, and interpreting the findings.

Data organizing is effective preparation for data analysis. Patton (2002) suggests researchers write case record to pull data from different sources together. The advantage of case record is: it is more manageable and including all the data for final case analysis and writing. First, I set up a data package of raw data for each case. Second, I reviewed the data and presented data of all sources in text together with my notes and memos. Furthermore, I put together the fragment data and got rid of the redundancy. In the end, I wrote case records in topical order and leave margins for memos. The data organizing also prepared a holistic picture and basic understanding of each case which was helpful for subsequent data analysis.

I used my case record for data coding. I repeated the following process for each case separately. After reading the whole case record several times, I identified meaningful text segments and highlighted them with a single word or short phrase as code label. After I finished coding the data, I made a list of code label in order that I could find and deal with the redundant code labels. Creswell (2012) points out that these codes are both useful to describe the context and develop themes as the key findings of the study.

Themes are bigger ideas developed from aggregation of similar codes. I developed themes by refining the codes: eliminating redundant codes and grouping the codes with similar meaning. Then, all the themes were labeled with no more than four words (Creswell, 2012). The themes development continued until there was no new evidence could lead to new theme. I used tables to facilitate the finding presentation and summarize the findings with narrative discussion. In the end, I compared and contrasted the themes across case and unraveled commonality and difference.

Researcher Perspective

The identification of researcher biases and deciding on strategies to deal with them is an important aspect of increasing the credibility of the study. First, I am instructor and from low-income family. I may have prejudgment toward the participants' story, and it could create commonality but help frame my analysis. Second, the experience of being in charge of a college financial aid office impacts my expectation regarding the research outcome. The empathy may be unconscious in the investigation. Third, I am accustomed to paying more attention to the positive influence of school and teachers. However, it is possible that the participants may have had negative experiences. To cope with these biases, Patton (2002) suggests researchers reflect and report its source and use multiple data sources, triangulation, external reviews and so on to produce high quality and reliable analysis. In addition, I reminded myself to be loyal to the data and collaborate with the participants to keep focus on their story.

Ethical Considerations

To protect the respondents' identities, I implemented following strategies. First, I made a recruitment presentation to all senior classes in their school and they could contact me directly. Second, I used pseudonyms for all participants, institutions, and people mentioned in interview. Third, being the only person having access to the respondents' data, I carefully preserved them in an encrypted package on a password protected personal computer. Before the actual data collection, I provided informed consent (see Appendix C) both in English and Chinese to guarantee the respondents really understand the research purpose, their benefits and rights.

Assumptions

Creswell (2013) notes that there are always certain beliefs and philosophical assumptions embedded in research and that qualitative researchers should highlight the importance of understanding and informing the reader about them. For the purpose of the current inquiry, my assumptions are: (1) participants will reflect on their experience in college in support of my research; (2) their challenging financial status adds to experiential differences with their wealthy peers; and, (3) all the participants are truthful about their story and by integrating data from multiple sources I can come close to the truth.

Limitations

The limitations inherent in this study relate to the type of school, gender difference, and ethnicity. First, cases were sampled in one private college for convenience and personal interests. The private colleges are not mainstream institutions in higher education system in China. Hence, further research on public institutions needed to complete the knowledge. Second, gender difference in this study was not discussed. Female students and male students in this group are distinct with regard to adversity and advantages in college experience and job-seeking process (Liu, 2006). However, the distinction of gender is not the purpose of this study, and this limitation could be pursued as a line of future research inquiry. Finally, although China has defined 56 ethnic groups and issued incentive policies for minority ethnic groups in college, this study’s participants did not contain students from minority ethnic groups. Given the complexity of ethnic issues, the findings could not be generalized to minority ethnic populations arbitrarily.

Data Presentation

Detailed description of case and its setting is a must for a case study. For this qualitative case study, I presented my data mainly in three steps. First, I made a narrative description of each case and its context based on the data collected from interviews and documents. The description was made in chronological order to reveal a holistic picture of the case. Second, I highlighted the experiences that answered my research questions in thematic order. Tables were used to construct an overview of the highlights (see Table 1). Third, I made cross-case comparison to uncover the complexity of the cases.

Table 1: Presentation of risk and protective factors

Factors	**External factors**	**Internal factors**
Risk factors		
Protective factors		

Summary

Due to the nature of the research question and purpose of study, I chose a qualitative design to explore the answers to my research question. Similarly, the purpose of the research also indicates the use of multiple case study design as the research methodology in the current inquiry. Purposeful sampling with clear criteria was effective for getting suitable cases. The analysis unit was identified as low-income students who achieve educational success. Criteria were developed for seeking qualified students. Data were collected by ways of interviews and documents in order to achieve completeness of the story and understanding the complexity of cases. To enhance the credibility of the research, engagement, setting description, and triangulation were used to catch and correct errors and gain deeper insight. I followed Creswell's instruction regarding analysis procedure and the presentation of the findings. To ensure trustworthiness of the research, I reflected on my bias and its possible influence on the research and solutions. Limitations existed with regard to school sampling, gender difference, and ethnicity.

Chapter 4: Findings

In China, low-income and first generation college students in private colleges undergo risks in their academic achievements and employment market. Selecting three students who have survived from the adversity, this study explored how low-income and first generation college students from Chinese private colleges achieved academic excellence and career preparation. Two research questions guided this inquiry:

1. What do the low-income and first generation college students perceive that contribute to their educational success?

2. How do risk and protective factors influence the low-income and first generation college students' perceived contributions to their educational outcomes?

In this chapter, first, I introduce my participants by presenting their background information. Second, I develop a rich case description for each participant in terms of how the participant experienced risk and protective factors. In each case description, I categorize all the factors into internal group and external group by referring to Howard et all's division of factors (1999). Third, I adopt cross-case analysis to compare the commonality and difference of the cases. I display a series of common protective factors contribute to the participants' educational success: internal locus of control, career and academic planning, financial aids, job-related experiences, and rational occupational aspiration. To answer the second research question, I research how the protective factors mitigate the effect of risk factor, which is often done by the previous resilience researchers. I have two unanticipated findings. First, the protective factors protect students from risk but also directly produce successful outcome. Second, the protective factors function by interacting with one another.

Introduction of the Participants

Ryan, Susan, and Jane are seniors at Newcomer College in Shanghai, China. Newcomer College is a private institution which provides four-year programs. Ryan has spent two years in the army after he studied for one year in the college. Hence, he is two years older than Susan and Jane. Because Shanghai is an international city in south of China, it has higher level of economic development and unique culture. Students from underdeveloped areas tend to face adaptation problems in both culture and discriminative policy in employment market (Lu & Deng, 2008; Zhu, 2013). When I collected the data, I took this trait into consideration in order to verify its influence. Jane was born in Shanghai while Ryan is from a notoriously impoverished province. Susan grew up in a charity house of a small city. They all applied for and received financial aids in the college. The college rates the students' degree of poverty and provided corresponding financial supports. Students whose family income is lower than the local poverty line are labeled as "first degree poverty" (Shanghai Civil Affair Bureau, 2015). Students of first degree receive higher financial aids. As for the career preparedness, Ryan and Susan claimed that they had received oral offers from their workplace, while Susan had finished her job interview and received formal offer. (See Table 2)

Table 2: Introduction of the participants

Name	Age	Shanghainese	Degree of Poverty	GPA	Received Job offer
Ryan	24	No	First	Top 10%	Informal
Susan	22	No	First	Top 20%	Informal
Jane	22	Yes	First	Top 3%	Formal

In the following section, I exhibit three cases in detail. I give each case description a title in which I highlight one of the participants' achievements in college. My purpose is to present a glimpse of their educational outcomes so that the participants have a distinguishable trait aside from their names.

Ryan will be a new Shanghainese. Ryan, 24 year, looks like a soldier more than a student. Although he has a mild and mature demeanor, it is easy to recognize that he has a military background. His hair is trimmed very short, which accentuates his tanned and round face. Standing, walking or sitting, he instinctively keeps his back straight and his chin withdrawn. He joined in the army when he was a sophomore. Having finished a two-year service, he came back to school and continued his education for free. This is a benefit the People Liberation Army (PLA) makes to recruit college students. In addition, since he has accepted a job offer to work in Shanghai, he will also acquire a Shanghai Hukou after graduation. Shanghai Hukou is the certificate of registered permanent Shanghai resident. It is rare for a non-local undergraduate to obtain a Shanghai Hukou, which is usually one of favorable policies to attract talents with selective professional or educational background for Shanghai. With Hukou, Ryan will have a number of privileges as a local Shanghainese does. For example, he will have more privileges in Shanghai employment market and entitled to buy a real estate before unmarried. His children will be accepted by colleges in Shanghai with lower matriculation score than nonlocals. To celebrate their social mobility, the media coins a term to describe the non-local Kukou holders, "new Shanghainese".

Although the military service contributed to Ryan's educational success, it nearly ruled him out as a qualified participant. I was looking for participants who studied in private college without interruption. I developed this standard to rule out students who had dropout experience. But Ryan's military service was different from dropout in nature. First, the nation guarantees the college students who had served in the army to finish higher education. For the students of exceptional contribution in service, they would be recommended to graduate school. Second, Ryan himself did not consider this choice as dropout. He researched the policy and rewards, and he knew he had better chance to complete his higher education if he was accepted in the army. As the researcher, I saw Ryan's story useful for students in need to know more about this policy and its effect. Consequently, his experience greatly enriched the findings of this study.

From village to metropolis and from a student to a soldier and back to a student, Ryan depicted his experience as dramatic as "a dream". He was born in a province which was infamous for its underdevelopment. His parents were farmers. Neither his parents nor his five siblings had been to college. Although Ryan was a promising student in his teachers' eyes, his father saw no need to pursue higher education. Moreover, college was too expensive. Failing his first National College Entrance Exam, Ryan was ready to leave school. But his high school teacher persuaded his father and him to try it again. At the second exam he was accepted by Newcomer College in Shanghai. The first year in college was rather disturbing for him. While learning the army recruitment program and its related benefits, he did not hesitate to sign up. After strict review of political background and psychical fitness, he was accepted as a soldier. Two years later, he came back and continued his higher education. Aside from Hukou, he received 150,000 RMB allowance and a medal. The leadership of college valued his military experience and invited him to work part-timely in the Security Office on campus. When he was about to graduate, the leadership offered him a full-time job in the college. He declined the offer because he had decided to start his career in his supervisor's start-up company after graduation. His salary would be higher than the average level of newly graduates in Shanghai. When asked his long-term and short-term plan, he said he would work in the company for several years. He added,

> "I don't aim high. I know my conditions. I don't have to live in Shanghai. I just want to live a peaceful but happy life. Rich or poor, it doesn't matter. As long as I have today's bread, I am satisfied."

The perceived risk and protective factors. When Ryan recalled his story, he was not only talking about his experience in college but also in the army and high school. But the experience which seemed unrelated to college actually impacted his strategies and educational outcome. Table 3 displayed all his perceived adversity and protection. Ryan reported his lack of social connections based on his setbacks in the army, while the supportive school personnel referred to the teachers in high school and college. In the following sections, along with elaboration on each factor, I also shed light on the how risk factors and protections accumulated.

Table 3: Ryan's perceived risk and protective factors

Factors	External factors	Internal factors
Risk factors	Financial hardship Lack of social connections	Lack of sense of belonging
Protective factors	Helpful policies Supportive school personnel	Problem-solving skills

Financial hardship. Ryan admitted the first year in college he was financially and emotionally stressed. His parents' income, combined with the money borrowed from their relatives and his student loan, could only pay the tuition and living expense for one year. To reduce the transportation cost, Ryan came to school by himself, only to find he was several days earlier than the schedule. The students' dormitory was not open yet. He could not afford a hotel room. At night he had to sleep on a bare wooden board, which left him uncomfortable memory. The situation got worse when he got along with his peers who seemed never to consider the living cost. Especially when they chipped in for a party, Ryan often quit because he was always on tight budget. When the new semester was approaching, he still could not accumulate enough money for tuition. Meanwhile, he began to worry that he could not pay back the debt depending on his college education. The experience was so depressing that he could help but consider leaving college. He recalled:

> "I was uncomfortable. I felt dull. …I often wandered in the school alone. But I didn't know where I should go, what I should do. I didn't have friends.…the school was meaningless. …My family has been drained. …I didn't want to stay in school any more".

However, he did not actually leave school until he learned about the Army recruitment policy. Ryan preferred joining the army to dropping out of college because the policy allowed he to come back to finish his education for free if he could not obtain a long-term career in the army. But the financial burden was only one of the factors that drove him to join the army.

Lack of sense of belonging. Ryan had never left his hometown before. To adapt to a new environment was rather challenging for him. Shanghai was totally different from his hometown both in level of development and culture. Although the city had a reputation for its prosperity, Ryan experienced major cultural shock. He had been to downtown for sightseeing only once, and he felt he was an outsider in this city. The locals spoke dialect which sounded like a foreign language for him. He did not buy himself a lunch because he was afraid that he could not afford it. In college, although he could communicate with students and teachers in mandarin, he did not have close friend. He preferred not to talk with his peers and teachers, because he did not believe they were interested in his words. He described his feeling:

> "I didn't like Shanghai.…I feel like I am only a tourist.…I have nothing to do with this city. …I felt lonely and scared. …I don't like the school. I don't know what I am doing every day. … I was an invisible person in my class.…When I join the army, I just go. …Nobody remembered me. "

These feelings indicated he lacked sense of belonging to this city and to his school. Outside of the school, he was shocked by the culture difference. Back at school, he felt no respect and caring. As a result, he took advantage of the army recruitment policy to help him out of his predicament.

Lack of social connection. Born in a low-SES family, Ryan had no social connections that helped him in career development. His college diploma was not competitive in the employment market. When he decided to join the army, he assumed that he would be judged by this performance not by his background in the army. In addition, he had college experience, which was rare and valued in the army. The college background was also an advantage to get promoted and access to the officer candidate school. To fulfill his purpose, he spared no effort to achieve outstanding performance. In his company, he was one of the only two soldiers who were awarded medals. In the second year, he found only the soldiers who had connections with the leadership got promoted or recommended to military school. His instructor, who appreciated Ryan, told Ryan if he chose to stay he would only be designated unfavorable work because of no background. Therefore, he returned to school disappointedly. Although still unsure about future, he did not worry about the tuition and life at least.

Helpful policies. There were three important policies providing financial support to guarantee his higher education and connected him to job opportunity. The first policy was the policy of national financial aid. As a low-income student, he could receive student grand and loan, 9,000 RMB for each year, which greatly reduced his financial burden and made the higher education accessible. The second helpful policy was the recruitment policy of PLA. In return, the policy gave nonlocal college student Hukou and considerable income. On account of his military service, his received 150,000 RMB and his tuition were exempted. He gave his parents a third of his allowance to improve their life and invested a third in his high school teacher's training school, receiving 10% interest on a monthly basis. Because of these benefits, his perspective about his life turned hopeful and confident. He felt,

> "It is no problem to finish my education. …I told my father not to worry about me. I'm good. …I can handle all my life in Shanghai."

Returning from the army was a turning point in his life. With Hukou, he did not feel like a tourist in this city any more. He was rearranged in a different class to resume his learning with new classmates. Without the financial concern, he actively participated in campus activities. He restarted his college life with a new identity and psychology. The third policy was that the college recruited low-income students to do part-time work on campus. The skills and experiences attained in the army brought him opportunity to communicate with the school personnel who finally offered him full-time job.

Supportive school personnel. Ryan named two helpful school personnel in his education and career. Mr. A in high school was referred to as most influential teacher in his pursuit of higher education. He said:

> "I know nothing about college. My father said I had wasted money in high school. I could only try the examination once. If I failed, I went to work… Mr. A came to my family. He said : 'you must go to college, go to the big city, go outside of this little place, even if the college is not good.' He said he could lend me money if my parents couldn't afford it. …He gave me some guidance and ideas when I was very unsure about my future. …… he told me to accumulate more social experiences. He said it was more important than in-class learning. "

As a first generation college student he had no one in his family to explain the value of higher education. His family did not understand the relationship between higher education and social mobility, either. Mr. A was a college graduate and his personal experience was rather convincing for Ryan and his family. Actually, they still kept close contact and it was in his training school that Ryan invested his money. Mr. B brought him exposure to school personnel and job opportunity. Mr. B was the in the staff of Security Office on campus. In order to set up a strong campus security team, the staff of Security Office organized all the students returning from military service to join in the campus security work. Mr. B appreciated his "problem-solving skills" and designated Ryan important duties while his peers primarily went on patrol. For example, he worked as an instructor in the routine military training for the students. Ryan spent so much time working with the staff that the students mistook him for a teacher. Mr. B treated him as a colleague and friend, working and having fun together. With the trust between them growing, their communication extended to the outside of the school. Mr. B had a start-up company, which provided outdoor training service. On weekends, Ryan often worked as the trainer's assistant in the outing projects for the company. Through working in the projects, he got in touch with people from various walks of life. Moreover, he felt fulfilled by helping people with his expertise. After graduation, Ryan would work full-timely in the start-up. In Ryan's heart, aside from the job offer, he secured sense of belongings by working with Mr. B. He explained Mr. B's far-reaching influence on him,

> "The first day I came back, I got up at 6 o' clock. I wrapped up my bedding and started cleaning just like when I was in the army. My roommates thought I was crazy. So I had to stop. I have a lot of time but I don't know what to do.…I felt lonely. …I am happy to work with Mr. B. He is not like other teachers. Some teachers in the office like to show off their authority. I don't feel hierarchy to work with him. …he introduced me to other teachers. I often spent time with them. I began to have my own social circle in the school. Teachers and students begin to know me and treated me as a teacher. I feel good. I felt respected. …

In all these interactions, Ryan and the teachers communicated as friends or worked together as coworkers. More importantly, the school personnel have experience and social connection of higher socioeconomic class. When Ryan set up connection with them, he also seized access to their culture and social resources. However, he did not get these opportunities by luck. In his communication with his teachers, he was also able to exhibit his competence and personality.

Problem-solving skills. Both in the army and school, Ryan was greatly recognized by his instructor and the office staff. He was deeply trusted and assigned critical works. When he worked in the Security Office, staff of other departments tried to persuade him to work for them. Ryan attributed the appreciation to his "problem-solving skills", which was defined by both his instructor in the army and supervisor in college. He gave me some examples to illustrate this quality. The first one happened in the army when he was designated to watch a warehouse. Usually, the soldier on duty only need sit in the warehouse until his shift was over while Ryan often looked around. One day he found a crack in the wall of the warehouse. At night, it rained and Ryan checked out the crack, only to find the rainwater was pouring in from the crack. He reported to headquarter right away and simply fixed the crack before it caused any damage to the appliance. He was awarded an honor medal for his timely and effective treatment. This experience brought him reputation and more working opportunities:

> "…the leadership know I am trustworthy and often give me important tasks since that day. They said they trusted my problem-solving skills. …They jokingly said they could fall asleep at night if I was in charge of the important tasks.…I feel when I am asked to do something, I must do it well."

The second example was in college. It also explained how he caught the attention of the staff in college. He said:

> "The staff said they had noticed me for a while, because I was the only one who acted like a real soldier. … I became famous the first day I worked. I wrote tickets to the rooms where was found cigarettes butts. Actually, all the rooms in a whole floor received my tickets. …I caught smokers in teaching buildings and asked them to put out their cigarettes. The students were startled by my strictness. …later the day, some students advisors complained to Mr. B about receiving too many tickets. I didn't budge. Mr. B didn't criticize me. Instead, he arranged me to lead in the weekly security inspection. …He said he trusted my problem-solving skills."

According to his examples, his so-called "problem-solving skills" consisted of the sense of responsibility and effective strategy. This quality was also demonstrated in his academic learning. I wondered how he was able to attain a 3.6 GPA, considering that he had so much work to do. He explained that he had a very tight and efficient schedule and he could study in the office. On the other hand, he assumed it was his responsibility to achieve great grade so that he could live up to the expectation of his family and teachers.

To sum up, Ryan experienced adversities derived from his disadvantaged socioeconomic status. The adversities not only impacted his persistence in college but also hindered his career opportunity. He also suffered from psychological stress because of poverty. Hence, all the perceived protective factors worked combined to meet his financial, career and emotional need. The financial aid and recruitment policy of PLA provided money and rebuilt his self-esteem. His experience in the army and capacity attracted the attention of college personnel so that he had opportunity to work with the staff and establish social connection. As a result, his connection with the staff brought employment opportunity for him.

Susan has happy mornings. Susan is tall and slim. Her shoulder-length hair is delicately straightened and dyed wine-red, which is shining and smooth like satin under the sunshine. Obviously, she is proud of her hair. At times, when she flicks her hair back, I can see her confident smile. She wears a light makeup, which makes the scar above her upper lip pretty arresting. Her Chinese name is a combination of two unusual Chinese characters. Out of intuition, I asked her if her name had some special story. She answered: “My dad gave me the (Chinese) name. It means happy mornings. He hopes all dark nights in my life have passed.” When she was talking, some words were not clearly pronounced. It seemed some muscles in her mouth were strained. Before I could respond to her answer, she continued to talk about her scar and her story spontaneously:

> “I think I need tell you my story first. I had cleft lip when I was born. You know, I am a “rabbit mouth”. (Pointing to her scar) So when I was two months old, I was thrown away somewhere. Someone picked me up and sent me to a charity house. There I was brought up by three blind people. You can say I have two mothers and one father…”

The charity house accommodates people of physical or mental disorder, who have no family to take care of them. Aside from living place and meals, each person also received 20 RMB on a monthly basis. Her mothers were accepted when they were abandoned as babies, while her father has been living there since his 20s. Susan's father, 79 years old, survived from the Cultural Revolution, and he was trained to learn Mao's sayings by listening to the news. After the Cultural Revolution ended, he applied his learning skills to acquire other knowledge he preferred. He never stopped learning and often helped people writing by dictation. Workers in the charity house often turned to him for suggestions. As a result, he was regarded as the most knowledgeable person in the charity house. Listening to his advice, Susan chose her college and major. In college, she received financial aids from college and the charity house, which covered her tuition and living cost. For the first year, she acquired scholarship for her excellent academic performance. In the second year, she tried some part-time jobs outside the school, which brought her sense of achievement. By now, she had been working in a tourism company for two years, and the manager also offered her to work full-timely after graduation. Meanwhile, she was preparing for the entrance exam of graduate school. She planned that if she failed the exam she would accept the job offer in the tourism company where she would be responsible for reception of foreign tourists. She loved the job very much and was expecting a wonderful life in Shanghai.

The perceived protective factors. Thinking over for a while, Susan still insisted that she have no adversity in the past. On the contrary, she was "the luckiest person". Compared with other people there, Susan's physical defect was the least significant, and she had parents who loved her more than their own lives. She could go to college while most people in charity house could not live without professional care, which made her full of gratitude and satisfied. As a result, I only analyzed the protective factors and boiled them down to the items in Table 4.

Table 4: Susan's perceived protective factors

Factors	External factors	Internal factors
Protective factors	Financial aids Helpful advisor Father's influence	Self-confidence Effective management of academic learning Rational plan on career

Financial aids. As for her higher education, Susan benefited from three types of financial aids. The charity house reported to the local government about Susan's college education. Due to her orphan status, she was allocated 1000 RMB every month until graduation. When Susan enrolled in the college, she also submitted an official paper which was issued by the local government to prove her status as an orphan. The college exempted her tuition fee, which was 29,000 RMB for one year. Her student advisor helped her fill out the application form for national financial aid. According to the rules for National financial aid system, she was rated as student of "first-degree poverty" and received 300 RMB on a monthly basis as living cost. In her sophomore year, because of her outstanding academic performance, she was awarded National Encouragement scholarship, which is specially set up for outstanding students of low-SES. Thanks to these financial supports, Susan could afford the college education and lived a comfortable life. She also talked about the psychological influence brought by the financial aids.

> "Some people, like teachers, they often want to help me. Some gave me money. I refused. I know it is their good will. But cash will ruin my dignity. … because I have got enough money from the school and government, I don't have to do that. …I don't worry about money. So when I look for the part-time job, I care about if it can broaden my horizon or if I like the job. I don't have to care about the pay."

The sufficient financial support guaranteed Susan's higher education. She also gave credit to her student advisor for some financial supports.

Helpful advisor. In college, Susan received a number of financial aids with different names for nuanced purposes. Her student advisor, a young nice girl, was professional. She was clear about the procedure of application for each program. She came to Susan and explained the program of each financial aid. The application forms and procedure was complex. To enhance the efficiency, the advisor filled out the forms while Susan only provided necessary documents. Aside from the financial aid, the advisor also recommended that she do some part-time jobs on campus. Susan commented on the advisor's work

> "For all kinds of programs, I am often the first person she thinks up. She would work for the application. All I need to do is to give her my information and a sealed document to prove my identity as an orphan.…occasionally, she invites me to her office and asks if I need some help. She is very kind and professional. She has empathy with me."

The student advisor connected her with financial resource and job opportunities that Susan did not know on her own. Susan felt lucky and grateful not only because she had help from people and government but also because she had a great father.

Father's influence. Her father, almost 80 years old, had been blind since he was three. He never went to school. Nevertheless, he was the most knowledgeable person in the charity house. When people wanted to write a letter or filed a document, they turned to her father for his dictation. He learnt by listening to the radio and this learning habit never stopped. Recently, because he was interested in laws, Susan was making audio recording about the science of law for him. She referred to her father as "the most important and influential people" for her. For twice, Susan was choked with sobs while talking about her father. She told me how his father loved her:

> "I was given to my father and mothers when I was only three months old. When in summer, there was not air-conditioner. It was very hot at night. My father could fan me all night so that I could have a comfortable sleep. …In winter, it snowed heavily. He couldn't see. He held me and slipped over. I was unharmed. But he broke his leg. (choked with sob) …when I was young, I ate someone's medicine by mistake. I passed out. In hospital, the doctor said it's no hope to cure me. My father knelt down and made kowtows to the doctor. (choked with sobs) …he held me day and night until I was cured. …We never separate before I come to Shanghai. …when I call my parents, he always puts my mothers on the phone. I know he must be in tears. But he doesn't want me to know. "

The intense love contributed to her sense of security and confidence. With her father's selfless love, Susan did not viewed herself as an orphan. She felt no self-conscious talking about her scar and the fact that she was abandoned by her biological parents. In her mind, she was no different from other student.

Her father was also the "wisest people" for her, because he had insightful guidance about her education. Since Susan was a kid, he told her that she would go to college in future. He kept negotiating with the principle of the charity house to seek all possible educational opportunities for Susan. Due to his efforts, Susan was able to go to high school after finishing nine-year compulsory education. At night, she had a social worker to escort her back home from school, which was requested by his father. In addition, he was also an excellent advisor in her learning. He coached Susan's writing and one of her an essays won a prize in a writing contest. When it came to higher education, her father's guidance was especially valuable for her, because his father was the only person had knowledge about college. Susan listened to his opinions when choosing colleges and majors. She described the process of decision making:

> "I wanted to study Physical Therapy. So, in future, I wanted to help the people like my parents. But my father fiercely disagreed. He said it would be too exhausting for a girl. He hoped me to live easily in the future. …For example, the accountant in our charity house was doing an easy job with satisfactory pay. He thought I should

> do that kind of job. …Shanghai is the economic center of China. Graduate of economy-related major is easier to find a job."

With reliable suggestions, the whole decision making process was much easier. The choice of college and major was based her father's personal perception rather than real experience. Susan was willing to accept his decision, because she trusted his knowledge and love. In addition, although he often proposed advice to Susan, he never imposed his opinion on his daughter. Now that Susan was about to graduate in one year, he encouraged Susan to pursue a Master degree in a selective college in order to broaden her horizon and prepare for better career choice. Her father did not give her specific suggestion on universities and majors, and he confessed it was beyond his knowledge. However, in Susan's eyes, her father was always a visionary. Having a knowledgeable and loving father brought her great confidence. She had made decision about her target universities and majors which were related to tourism. She had prepared all the required reference books for the entrance test. Although knowing the acceptance rate in her target schools was low, she had great confidence in her success.

Self-confidence. I was amazed that Susan could tell her story fluently in English given the fact that she was not an English major. She explained self-confidence played great role in her language learning:

> "My classmates can speak English better than me in class. They had better training in high schools. But they are too shy in front of foreigners. I didn't. I dare speak with the foreigners. I am not afraid of mistakes. "

But Susan said she did not establish her self-confidence until she found she could solve her hardships by herself. When she just came to the college, she could not do course project with computer. In her high school, there was no computer class and she did not have chance to learn by herself. Initially, she turned to her classmate for help from basics. Being tired of waiting for other's help, she managed to solve all the problems by herself, which turned out not hard at all. She learnt to search solutions to all problems on line. The experience of learning computer encouraged to explore more about the world she was interested. She started to work par-timely out of college in the first year. Compared to in-class learning, she preferred to practical work, because she could perceive her competence and success. In some social networking sites, she found some groups who claimed that they were employment agents. Some of them truly helped her find job as family tutor while some defrauded her of money. With or without pay, she tried several jobs. Eventually, she found her "challenging and rewarding" job in a tourism company. She was responsible for reception of foreign tourists, which mainly included receiving the foreign guests in the airport and leading them to check in the hotel and so on. In the beginning, the job opportunity was given to her friend, an English major. Her friend thought it was too challenging and introduced Susan to do it. She had been doing this job for two years. The experience of this part-time job not only helped her improve her spoken English but also strengthened her self-confidence. She recalled:

> "In the beginning, some Russian and Sweden guests complained me for my English. I felt a little upset. But I don't lose heart.…I comfort myself that they couldn't speak English well, either. So I know I should improve my English. But that's not all about language. Later on, when I have problem in communication with the foreigners, I use gestures or draw pictures to help me convey my ideas. …I can always complete my task successfully. …I tell myself, there is nothing to fear. Fear doesn't help at all. …For these years, I always depend on myself. I can do it, and I can do it excellently."

Because she spent much time in the works off-campus, her transcript was not outstanding any more. However, Susan explained the result was anticipated.

Effective management of academic learning. The first year in college, Susan worked so diligently on her learning that she was awarded scholarship. But she changed her mind when she did some part-time jobs. She liked to solve problems in practice and she enjoyed the success. The courses were not hard for her, and she had confidence to achieve required GPA for graduation. Hence, she felt it was feasible to shift her focus on work in future. To acquire the diploma, in addition to GPA, she must pass level one of computer test and band four of English proficiency test. Therefore, she managed to pass both tests in the first year. In the following years, Susan was relived to devote herself to her jobs. Thanks to her effective management of learning, she was well prepared for graduation and career.

Rational career planning. She attributed her career preparedness partially to her low expectation on career. She would acquire a diploma from a private college which was no competitive in the employment market. She wanted to work and live in Shanghai. But she had no social connections to good job opportunity here. Therefore, Susan adjusted her expectation so that she could make a living first. She explained:

> "The pay I get from my part-time jobs is low. 100 RMB a day. Nobody except me would like to do it. For most students, it is not worthwhile. …I must get up at 4 in the morning to receive the guests. No student here is willing to do it. …if the job is pretty good, I won't have chance. …as long as I can make a living to live independently, it is a good job for me…"

She believed she could get promoted with rich experience and technical certificates in few years. To achieve her goals, she set up specific and attainable plans:

> "If I fail in the entrance test for graduate school, I will go to work. …I will go to pass the test of certification for tour guide. And I will also pass the advanced interpretation of oral English. In shanghai, English can open many doors for you. … I will work in the tourism company for three to five years. With experiences and technical certification, I believe I can get higher salary."

In summary, Susan considerably benefited from the financial aid which guaranteed her education and life in college. Her father's guidance and knowledge of education contributed to her pursuit of higher education and self-confidence. With the self-confidence, she boldly explored job opportunities and eventually found her interested industry. She set up realistic career aspiration and specific plan based on her working experience. Meanwhile, to fulfill her career goal, she adopted effective strategy to balance her learning and working. On account of these preparations, she was offered full-time job opportunity.

Jane will work in college. Jane was donned in white shirt, black suit and high-heeled leather shoes. She stood about 1.5 meters tall with a pair of thick black-framed glasses pressing on her nose. Her innocent wide eyes were shinning behind the glasses. Although dressed professional, her carriage was like a lovely high school girl. I expressed my gratitude for this interview, and she giggled. Her petite frame made her cute and approachable. When I congratulated her on her job offer, she sighed she was getting a little bored to work in the college where she had stayed for four years.

Jane was a local Shanghainese. Her father passed away when she was a kid. Her mother was a warehouse keeper, raising two children with a modest wage. Jane’s older sister had been working after high school in order to assist her mother to support the family. Jane had been a straight A student from primary school. In her family’s and teachers’ eyes, she was a promising student. She had planned to study in a public university. On the one hand, a diploma of public institution was more competitive in the future. On the other hand, the tuition for public institution was much lower. However, she did not achieve adequate score in the College Entrance Exam for public university. As a result, she received admission letter from the private college. Since their income had increased, her mother and sister encouraged her to go to the private college. She decided to apply for student loan and scholarship to support her education. In college, she was identified as “first degree” low-income student. She obtained both student loans and grants. By virtue of excellent performance, she was awarded scholarship every year. Meanwhile, she was recommended to work in the Student Affair Office, where she set up frequent and deep connections with college personnel. Along with academic achievement, her working capability and attitude obtained recognition from the leadership of the college. When the college recruited employee from the students who were about to graduate, she grabbed this opportunity. Having passed a series of writing tests and interviews, she received the job offer. In August of next year, she would be a student advisor in this college.

Perceived risk and protective factors. Table 5 is an overview of the Jane's perceived risk and protective factors. It is noted that this structure does not indicate direct relationship between the risk and protection. Moreover, I unfurl Jane's experience in terms of how this factor influences her success in thematic order. This order is supposed to reveal the connections of the protective factors.

Table 5: Jane's perceived risk and protective factors

Factors	External factors	Internal factors
Risk factors	Financial hardship	Inferiority complex
Protective factors	Financial aids Part-time work on campus Identity of local Shanghainese	Outstanding academic achievement Career planning Low occupational aspiration

Financial hardship. The financial hardship had pressured Jane's older sister to give up college education and share the family's burden with her mother. As for Jane, although she had chance to higher education, she had limited school choices. She could only consider the public universities, which required higher score in matriculation but much lower cost. Unfortunately, Jane was transferred to private college because her score failed to reach the acceptable level to public universities. When she received the admission letter of private college, she emotionally "fell apart". She really longed for college, while she could not afford the cost, 20,000 RMB a year. Her mother borrowed money from relatives to pay the tuition for the first year. Jane felt guilty for putting her family in debt and she made up her mind to pay for the higher education by herself. As a result, making money was her priority in college. She recalled:

> "…in the beginning, I fell apart. … I felt so bad. …Before I came here, I have decided that I will make money to pay for the education. (How?) Student loan, scholarship, part-time jobs, anything. …so when other students go to college happily, I was worried how I could make enough money. I couldn't stop thinking about it."

The financial pressure also deprived her of the choice of graduate school. She had kept remarkable learning record since elementary school. In college, her student advisor encouraged her to pursue Master degree because she was rather hopeful. Tempted by Master degree for several days, she eventually gave it up. She explained:

> "my classmates could think about working first or graduate school first. For me, I only have one choice. Go to find a job. As soon as possible. I have no money for graduate school. My mom works too much for me. I want to help her. At least pay off the debt."

However, compared with the loss of graduate school, the negative influence on Jane psychology was perceived much greater.

Inferiority complex. Jane suffered from inferiority complex the first year in college. She realized that other students were from wealthy family and they never had to budget and work for money. Feeling inferior to her peers, she was not willing to communicate with them. She was afraid that they found her poverty, and she withdrew from campus activities.

She described her experiences:

> "I find people in this college are rich.… sometimes the students talked about their family. Someone's father is a senior official in the government. Someone has many houses in somewhere. I know I am different from them. so I avoid talking with them. They will despise me if they find I am poor and frugal. … I feel inferior and scared."

Financial aids. Jane considered the financial hardship as the greatest obstacle for her higher education. Therefore, the financial aids were the most supportive that contributed to her educational education. Along with the admission letter was a pamphlet that introduced the National Financial Aids System. Knowing this system, she was a little relieved and decided to go college in spite of the big cost. Jane's family paid the tuition for the first year. She also applied for student loan and received National Grant as living cost. From the second year, she was awarded National Scholarship and National Encouragement Scholarship. National Scholarship was for the students of outstanding performance while the National Encouragement Scholarship was to honor the low-income students who had remarkable academic achievements. These financial aids made up for Jane's tuition. Along with the income she made by working part-timely on campus she supported herself in following three years.

Academic achievements. Jane was always a high-achiever in school. When she was in college, she worked hard in order to acquire scholarship. For three years in a row, her GPA was always in top five in her majors. Her eminent performance brought her kinds of scholarships from college and government. For example, the National Scholarship offered the highest prize, which was only awarded to six students out of five thousand in her college. Aside from financial support, her outstanding achievements attracted teachers' attention. Given the fact that the teachers considered academic performance as critical factor when they were looking for an assistant, she was recommended to work in some offices. She was satisfied with the pay of the part-time job. More importantly, these working experiences made her exposure to more teachers and leaderships.

Part-time work on campus. Jane identified her working experiences on campus as protective factor, because they brought income, built up her computer skills, solved her inferiority problem, and connected her to the college staff. The college set up some posts for the low-income students. Jane submitted her resume and passed the interview. In the sophomore year, Jane was recommended to work as an assistant in the Student's Affaire Office. In the beginning, her main purpose was to make money. The working time was flexible and she did not have to spent time and money on transportation. Her job was mainly doing paper work in computer. She was not familiar with the software of Office before. To complete her job, she learnt by herself or turned to teachers for help. Shortly, she could handle the paper work by herself. The computer skills she acquired were also the skills she would apply in her formal job. Moreover, she spent most of her spare time in the office in order to perfect her work. Her diligence and performance were highly recognized by the staff in the office, and they regarded her "indispensable". She felt accepted and respected, which helped her regain the confidence and promise. She depicted this work a turning point in her college life:

> "I can say from then on my life was different. My days began to have sunshine. Before that, it was always cloudy. I felt inferior to others and scared. Dare not think about the future. I was pessimistic. …everything was getting better and better from then on…This job made me know more about the teacher and the school. From their reaction, I feel respected. … I feel confident."

Jane worked in the office for two years, and her commitment gained her good reputation in the staff. When her work in the student office was ending, she was recommended to another office. The head of the office was also the dean of the department, who made the final decision to employ Jane. However, Jane explained she did not get this job merely depending on relationship with the staff. She had prepared for the opportunity since she was a sophomore.

Career planning. While keeping excellent performance, Jane actively participated in all kinds of campus activities so that she could be known by students, faculty and staff. In the sophomore year, she learnt that the college intended to choose some outstanding students who would able to work full-time after graduation. She discussed with her mother about this. Her mother viewed it was “very nice for a girl to work as a teacher in college”. Jane consulted her student advisor about the qualifications for this opportunity and started prepare for it. In the end of the sophomore year, she joined the communism party and became a party member. In college, only very few students who were recognized by both peers and teachers could get the membership. Usually, the membership was also a favorable condition for employment in colleges. When she worked part-timely in the student’s affair office and department office, she also managed to exhibit her capabilities in order to impress the staff there. In addition, she also communicated her aspiration to the staff and the dean, who instructed her to prepare for the interviews. She was proud of herself for her career planning:

> “I felt fulfilled. All of these are under my control. I completed my goals, to make money to pay the tuition and to work in this school. I got everything I deserve.”

The identity of local Shanghainese. Jane told me she had a head start to achieve the job as a student advisor in college. The evidence was non-local students were not hired although they were also involved in the competition. It was a hidden rule to hire local student as priority. First, the employer expected the stability of their employees. The locals were assumed more likely to work longer because their families were in Shanghai. Second, because the non-locals need rent or buy an apartment, the pay of this job was more acceptable for locals. Therefore, Jane concluded her advantage as a local was only for some jobs and employers who had preference. She added that she decided to do the job because she could not aspire to a promising career.

Low occupational aspiration. Jane held low occupational aspiration considering the following factors. First, it was reported that the employment market was increasingly sluggish, and her diploma of private college did not help at all. Second, she could not afford to try other companies. It took time and money before she could find a decently paid and promising job. Third, she wanted to live independently as soon as possible so as to relieve her family from financial pressure. Hence, she would like to accept the job even if she did not actually like it. She justifies her decision:

> "In other people's eyes, the pay barely reaches the average level of newly graduates. I can't anticipate promotion in near future with a bachelor degree. …this job is best for me. At least I can live independently ever after. …If you really have to ask me, I can only say I don't dislike it. Like or dislike, it is never my consideration. …Life is no fairy tale. I must survive first."

To recap, although the protective factors occurred at different times, they jointly worked on Jane's academic and career outcome. She strived for high performance in order to obtain financial aids and awards, which overcame her financial hardships. Meanwhile, her remarkable performance also brought her part-time work on campus. Working with the staff not only cured her inferiority complex but also developed connection with the college personnel and leadership. Seeing the employment opportunity in college and evaluating her advantage and need, she purposefully prepared herself for a career in college. Eventually, thanks to her meticulous preparation and connection with college personnel, she got employed in her college successfully.

Cross-case Analysis: The Similarity and Difference

When I presented the findings in previous sections, a number of similar themes emerge. I display the similarities and differences in Table 6 and Table 7 respectively. In the section of risk factors, I put emphasis on the diversity. As for the protective factors, I highlight the commonalities not only because they are the focus of the study but also because the participants shared more similarities than differences.

Risk factors. Low income and the status of first generation college student have been proved risk factors which undermine the students' persistence (Anderson & Hearn, 1992; Terenzini et al., 2001; Titus, 2006), major choice (Cao,2013;Deng, 2012; Wang & Gu, 2005), career choice (Goyette &Mullen, 2006), and post-graduate educational aspiration (Li, Li & Zong, 2007; Lv, 2007; Paulsen & St. John, 2002, Walpole, 2003). In this study, the participants perceived three risk factors which derived from the unfavorable status: financial hardships, psychological maladjustment and lack of social connection. These risks threatened the students' education and career choice. For Jane and Ryan, mere one-year tuition exceeded the family's income of a whole year. Ryan chose to join the army because he could not afford the cost and lacked sense of belongs in college. Lacking necessary social connection, he could not continue his career in the army. Jane's elder sister did not enter college as a result of poverty. Although Jane obtained the opportunity, she felt inferior to her peers as a low-income student. Jane once considered going to graduate school but finally decided to work first because she could not afford it.

Table 6: The similarities and differences of risk factors

Similarity	Difference
Financial hardships (Jane and Ryan) Psychological maladjustment (Jane and Ryan)	Lack of social connection (Ryan)

Since I adopt a perspective of resiliency, the participants are students who attained successful outcome. As low-income and first-generation college students, they did not report much negative effects. It is because they have a series of protective experiences before the negative result comes into being. For instance, they all mentioned they intentionally prepared for career early, which is a precaution against the risk of unemployment. Furthermore, how they experience the protection also influences their perception of the risk. For example, Susan did not feel financial problem because she was exempted the tuition when she studied in college. In comparison, Ryan and Jane had to borrow money to pay the tuition for the first year despite the financial aid they received. Being a first generation college student, Ryan reported he failed to fulfill his career goal because he lacked social connection while Jane did not feel any disadvantage because she established frequent connection with school personnel since she worked with them from the second year. In brief, their perception of adversities as low-income and first generation college student is greatly influenced by the protection experiences.

Protective factors. In the previous sections, I presented the protective factors from the participants' perspective and demonstrated the interaction of these factors. In this process, the commonalities and differences across all cases emerged naturally (see Table 7).

As for the differences, they derived from the participants' unique experience and background and also strengthened the participants' educational success by working together with other factors. In the following sections, I discussed the similarities so as to gain an in-depth understanding about their effect.

Table 7: The similarities and differences of protective factors

Similarities	Differences
Internal locus of control (Ryan, Susan, Jane)	Helpful policy (Ryan)
Career and academic planning (Susan, Jane)	Academic performance(Jane)
Financial aids (Susan, Jane)	Father's influence (Susan)
Job-related experience (Ryan, Susan, Jane)	Identity of local Shanghainese(Jane)
Rational occupational aspiration (Ryan, Susan, Jane)	

Internal locus of control. Faced with their adversities, the participants exhibited significant internal locus of control in their college experience. Ryan proposed two protective factors that reflected his autonomy, helpful policies and problem-solving skills. Feeling depressed in the college, he took advantage of the recruitment policy as opportunity to relieve himself from poverty. In the army, he put forth effort to adapt to the environment and seek career opportunity. Working on campus, he managed to fulfill his task and achieve high grade. The college personnel who valued this quality eventually offered him occupational opportunities. As for Susan, from teaching herself computer to finding a job she loved, she fearlessly confronted the problems head-on and explored solutions. Especially, to make sure she could acquire the diploma while spending much time working outside, she prepared her academic study beforehand. To relieve financial pressure of her family, Jane made the plan to work and study hard in college so that she could attain scholarship and pay for the education. She was active in extra-curricular activities and part-time jobs to enhance her exposure to both peers and school personnel. She also joined the communist party, which was an honor for outstanding student and a favorable condition to work in college. Apparently, to overcome the barriers and achieve their goals, the participants not only worked hard, but also autonomously sought helpful personnel and resource. The internal locus of control of the participants exploited both their personal capacity and external resource, which played a pivotal factor in the educational resilience.

Career and academic planning. Back in high school, all participants were high-achievers and they commented that learning in college was not challenging at all. They intentionally managed to sustain necessary academic performance so as to access the opportunities and resources they needed. In particular, the participants autonomously manipulated their academic learning in service of their career development. When they were doing part-time jobs, they purposefully evaluated the connection between the academic learning and their career opportunity and took corresponding strategy. Working in college, Ryan and Jane realized the academic success were at stake. Ryan strived for good GPA regardless of tight schedule, because high performance attracted attention of college leadership who offered full-time job offer in the security office. Jane's remarkable transcript was her tool to get scholarship so that she could pay for her education. Meanwhile, with the aspiration to work in college, Jane intended to gain recognition in both students and teachers by prominent performance. Susan employed different strategy because she was more attracted to work since the first year in college. She would like to accumulate job-related experience out of campus and continue learning in graduate school. She decided to obtain the diploma instead of a conspicuous transcript. Therefore, she only worked on the required grade and tasks, which was her strategy to balance her learning and working. Compared with Ryan and Jane, although Susan did not make great academic accomplishment, she explored and fulfilled her vocational interest by doing a job she truly loved. Regardless of different strategies, all the participants made use of academic achievement to fulfill their career goals.

Financial aids. All the participants in this study benefit from financial aids that the government set up to support impoverished college students. The financial aid gave Ryan the access to college. As an orphan, Susan was exempted all tuition in college. Meanwhile, she also got funds from both national government and local institutions. Jane, with preeminent academic performance, obtained all kinds of scholarships to support her cost in college. The financial aids system included students of different types and safeguarded their college education.

Job-related experience. Survey indicated that low-income college students were more likely to do part-time jobs, which assisted students in gaining financial income, accumulating job-related experiences, and honing interpersonal and problem-solving skills (Zhao, 2013). All the participants of this study had rich job-related experience, either on campus or outside. The private college opened some positions to students to enhance their income and the management efficiency. More importantly, for Ryan and Jane, these job opportunities on campus invited them to interaction with school personnel. A wealth of studies had uncovered that teacher-student interaction had significant contribution to students' academic achievement (Anaya & Cole, 2001) and persistence (Pascarella & Terenzini, 1977). In addition, for the first-generation college students, the teachers served "cultural translator "(Morales, 2010), who made the middle class culture and social capital understandable and accessible to the students. Ryan worked with the staff so much that he was viewed as a teacher by the students. He was recognized by the staff and got exposure to their social capital. Hence, he was offered the formal employment opportunity. For Jane, interaction with faculty members provided psychological support, which strengthened her sense of belongings in the college. In addition, while working with the faculty, she found her role model of life and practical career opportunity. Susan mainly worked out of school and she kept on trying a variety of jobs and industries. Her working experiences prepared herself for her formal employment but also clarify her interests and aptitudes. In general, these job-related experiences eased both financial and psychological pressure, but also brought them access to some industries, exposures to personnel, career preparedness and job offer.

Rational occupational aspiration. Irrational expectation on career was found as one of barriers that hindered low-income college students' employment (Lai, 2008). Specifically, they tended to pursue jobs with competitive salary and prestige, if they had debt to pay and were the first people in their family go to college. In this study, all participants had no debt or had debt paid back thanks to the supportive financial aid and policy. More importantly, their career choices were also the result of the rational evaluation about their selves, social connection and job market. All the participants described their career expectation "not high". Ryan, after paying off his debt, still felt the life in Shanghai was difficult. Without social connection and competitive diploma, he did not have too much career choices. Hence, he decisively grasped the job offered by his teacher. Jane, learning the job opened to students, she consulted with her advisor about the qualification and purposefully prepared for it. Despite the modest salary, she viewed the career in college as “not a bad” choice for a female. Susan tried an array of jobs and decided to work in an industry fit her interest and expected to work long in tourism. Generally, all participants put living independently as the most important condition when considering career choice.

In terms of differences, they were context-specific and generated from the participants’ diverse personal trait, coping strategy and background. Furthermore, each factor overcame hardship in concert with other factors. The recruitment policy for Ryan was useful, because it not only solved his financial pressure but also offered him experience in the army. This experience was the direct reason why he got access to the helpful school personnel and their vocational opportunity. Susan’s father helped her gain confidence and coached her with his understanding about the educational value, which prompted her to explore career opportunities and further education. According to Jane’s description, the identity of local Shanghainese is more competitive for some particular occupations and employers. As a local Shanghainese, Jane sensed her head start on applying for the job in her college. Eventually, she was employed as she had planned. For each student, the special protective factor is only one integral part in a series of helpful events. All the protective factors working together paved the way for the educational success of the students in this study.

Unanticipated Findings

1. How do the participants define protective factors?

When I reflect on Susan's experience, she claimed she had not experience any risk as low-income and first generation college students. One critical question emerged: "how can they define protection without perceived risk?" The resiliency researchers tend to define an event or experience as protective factor according to how it interacts with the risk. I reviewed the other two participants' experiences, realizing she was not alone. I found the participants used two criteria to define protective factors. First, the event or experience directly offset the risk. Financial aid was protection for Jane, because it removed the financial pressure. The recruitment policy was protective for Ryan because it ended up with financial support. Second, the event or experience had nothing to do with the perceived risk but contributed to the success. For instance, Susan defined her career planning as protection not because this strategy offset any perceived risk but because it helped her obtain employment opportunity.

2. How do the protective factors interact one another?

The interaction of the protective factors is a common trend across the three cases in this study. The protective factors were found to interact one another in two ways. First, the internal and external protective factors facilitate educational success in cooperation. All the participants outlined a cluster of protective factors deriving from external and internal assets, and these factors provide protection in combination. Second, the collaboration of internal and external factors can foster new protective factor. For the participants, these perceived protective factors did not take place simultaneously. When some internal factors cooperate with external ones, some new protective factors come into being. For instance, Jane's excellent academic performance and the financial aid program provided her access to the job opportunity and school personnel on campus. Academic performance, financial aid, job-related experience and supportive personnel are all identified as protective factors that contribute to her career success. Another typical example is "rational occupational aspiration", which is a shared protective factor reported by three participants. The participants form career aspirations according to their real working experience and autonomous quality. Hence, new protective factors are generated from the interaction of existing protective factors.

Chapter 5: Conclusion and Discussion

The previous chapter displayed description of the factors contributing to participants' educational outcome. Moreover, by comparing the similarities and differences in their experiences, I gained in-depth understanding of how the resilience came into being. The answers to my research questions naturally surfaced. In this chapter, I started from the answers to each research question and elaborated on what the answers meant. The discussion continued with how the findings related to the prior literature. In the end are implications for policymakers and suggestions for further research.

Research Question One: What Do the Low-Income and First Generation College Students Perceive That Contribute to Their Educational Success?

Conclusion 1: internal locus of control, career and academic planning, financial aids, job-related experience, and rational occupational aspiration contribute to students' educational success.

The students' active involvement in environment indicates their belief that they can make use of environment to achieve their goal, which reflects their internal locus of control (Rutter, 1999). The internal locus of control has been identified as a contributor to success of low-income college students (Borman &Overman, 2004). The Chinese researchers of college resilience discover that internal locus of control predicts academic success of low-income students (Feng, Zhou, and Xin, 2012). They explain that students of internal locus of control hold the belief that they should or can change their poverty with their diligence. In the current study, I define resilience in two aspects, academic performance and career preparedness. It is obvious that the psychological trait also plays significant role in their career preparedness. Ryan and Jane have clear perception and painful experience about poverty. Faced with the adversity, they sought working experience and exhibited capacities when working on campus. Eventually, Jane was employed in her college while Ryan received job offer from his teacher's company. Because Susan craved for working experience out of campus she explored in tourism industry. Having worked for two years, she built up her language ability and accumulated experiences, which fully prepared her for the career opportunity in tourism companies. Actually, when looking into other perceived factors, such as academic and career planning, I also view them as the reflection of this psychological attribute.

Chinese researchers assert that low-income and first generation undergraduates account for the majority of unemployed college students after graduation or employed with lower salary (Zhu, 2009; Lian, 2009; Wen &Yue, 2013). The reasons are: 1)Low-income and first generation students tend to hold unreasonable occupational expectation because they need pay back their debt and student loan and lack effective career guidance; 2) their parents have no knowledge to offer guidance in their learning and career development, 3) the students do not prepare occupational skills and experiences. In this study, the participants have no problems mentioned above, because they started working as early as second year in college, and these working experiences are meaningful in three aspects. First, they attained in-depth knowledge about one industry. With the knowledge, they assessed their career interests and opportunity. Meanwhile, they established realistic career aspiration. For example, all participants realized the diploma of private college was not competitive in job market. As a result, they accepted the job they were offered in spite of unattractive salary and corporate prestige. Second, they set up connections with personnel who have experience and resource. When working with the personnel in workplace, the participants accessed to work-related guidance and resources. For instance, Ryan was invited to work in his teacher's start-up while Jane received a full-time job offer in her college. Third, the participants accumulated working experiences needed for prospective career. Aside from these implications, these job-related experiences enable the students understand the relationship between academic performances and career success. Consequently, the participants were highly motivated to secure academic accomplishment. As the low-income and first generation college students, although they have no guidance and social connection from their parents, they explore firs-hand experience in the workplace and develop social connections on their own.

According to the participants' experiences, there are three salient characteristics about the system of financial aids in private college. First, it offers so powerful financial assistance that it facilitates the low-income students' decision to pursue higher education. Especially, the cost of private institutions is much higher than the public ones and the low-income students can count on the financial aids to finish their education. Second, it both fulfills financial needs but also motivate students' learning and working. According to Jane, aside from general financial aid, there is special award for low-income students with excellent performance. Furthermore, as one of financial aid programs, the college set up job posts on campus for low-income students so that they could earn salary and gain working experiences. Regardless of varied background and demands, the low-income students can seek benefit from this system.

Research Question Two: How Did the Risk and Protective Factors Influence the

Low-Income and First-Generation College Students' Perceived Contributions to Their Educational Outcomes?

Conclusion 2: The primary risks that the low-income and first-generation college students undergo in private college were lack of social connection, psychological maladjustment and financial hardships. These risks limit the students' career choice. When choosing a career, the students take survival as priority and seeking psychological acceptance.

The Chinese scholars find that the competition in job market for college students not only demands personal capacity but also social connection and financial support (Zhao, 2015). The investigation of Beijing Normal University indicates that social connection is the prime contributor of employment of college students in China (Chen, 2008). High family income and occupational prestige predict high job satisfaction and prestige of students (Zhao, 2013). In other words, competitive career opportunity and further education need financial cost and social capital. Perceiving their risks, the students lower their aspiration to avoid unemployment. For instance, they ignored their personal interest. Their paramount principle for career choice is that the income should be able to support their "independent life". The low-income and first generation college students are mainly from undeveloped rural area or low-socioeconomic family in urban area (Yao, 2014), while the colleges tend to be built in cities. Students from undeveloped area or low-SES family in college often experience two types of culture shock: unban culture and/or consumption culture. This experience cause psychological maladjustment, such as, lacking sense of belonging which has been verified one of contributors to suicide, violence, and dropouts of low-income college students (Lian, 2015). Jane was overwhelmed by the consumption culture of her peers while Ryan felt excluded by the urban life and rich classmates. When they worked with the college personnel, they regained their dignity and received acceptance. The psychological experience enabled them to accept the job. To conclude, the financial risk and its psychological influence frame students' pattern of career decision making.

Conclusion 3: the protective factors offset the risk and produce educational success.

In chapter 4, the way how the participants define protective factors suggest that they experienced two types of protection. Some protective factors overcome particular hardship while other protective factors merely provide support related to success. The researchers have studied the diversity of protection and constructed three models (Zimmerman &Arunkumar, 1994): 1) Challenge Model. In this model, the risk factor can have protective effect if the risk is exposed in a minimal level. For instance, an individual living in moderate level of poverty learned to cope with financial problem. 2) Compensatory Model. This model acknowledges that the risk has destructive impact while some protective factors can offset the negative influence. A typical example from the current study is the financial aid system solves low-income students' financial hardships. 3) Protective Model. Protective factor in this model directly leads to positive outcome or shields an individual from a risk. To illustrate this point, consider the fact that Susan did not perceive financial hardship but defined financial aids as helpful to her success. The financial support from schools and government always arrived before or her poverty took effect. Another example is that the three participants all identified career planning as protective although it did not directly interact with any risk. Theorists of resiliency emphasize that one individual may experience more than one model simultaneously. Meanwhile, one similar identified factor can function as different model in different case. For example, financial aid is in a Compensatory Model in Jane's and Ryan's cases while it is in a Protective Model in Susan's case. In this study, protective model and compensatory model are applicable to explain the findings. Challenge model is not discussed because it needs longitudinal data to verify a factor's quality. The multiple models of protection provide a basis to interpret the complexity of resilience. Although the compensatory model can reflect specific interaction between risk and protective factors, the protective model is more widely accepted (Zimmerman & Arunkumar, 1994). Apparently, it is because this model explains connection between protective factor and positive outcome which offers clear guidance for supportive policy and program.

Conclusion 4: The protective factors contribute to educational resilience by interacting one another.

There are two resources for protective factors: internal assets and external assets. A great number of previous researches have proved that the protective factors often work jointly in students' resilience. Morales (2010) argues the protective factors are not simply stacked in quantity and there must be embedded connections. However, the theoretical framework and only few researchers pay attention to the connection of multiple protective factors (Morales, 2010). The current inquiry reveals the interaction between factors. On the one hand, the protective factors collaborate with each other to achieve educational success. On the other hand, the interaction between internal and external assets generates new protective factor. For example, the opportunity of work on campus combined with Ryan's sense of responsibility attracted the attention of school personal who offered him a full-time job. The new factor could be internal or external factor depending on its quality. On some level, it definitely enhances the protection as a whole.

The Relationships between Findings and Prior Research

Research of resilience derived from western academia, and it has a long and fruitful history (Luthar, Cicchetti & Becker, 2000). In China, although comparatively new, it has attracted a great deal attention of Chinese scholars. Generally, studies of resilience may include three components: to define resilience, to identify the risks and protective factors, and to illustrate the process of resilience. To define resilience of population, the researchers consider the specific adversity and the outcome most individuals obtain. The principle of definition is the achievement "when such achievement is rare for those facing similar circumstances or within a similar sociocultural context" (Gayles, 2005, p. 250). When it goes to educational resilience, Western researchers tend to use persistence and academic excellence as the resilience of low-income and first generation college students. According to Chinese academics, this population undergoes risk of employment after graduation, and the investigations are still mainly focused on success of academic learning and degree attainment. Hence, I expand the content of educational resilience by including career preparedness in this inquiry, which enriches the diversity of educational resilience of college students. In the following paragraphs, I discussed how my findings related to previous research in terms the risk, protective factors and models of resilience.

Both western and Chinese researchers identified a multitude of risks that low-income and first generation college students are faced with in college, such as, lower GPA (Walpole, 2003), lower social involvement on campus (Arzy, Davies, & Harbour, 2006), more problems of peer communication (Liu, 2003; Lu, 2005), lower post-graduate educational aspiration (Li, Li & Zong, 2007; Lv, 2007; Paulsen & St. John, 2002, Walpole, 2003), lack of social capital(Zhen, 2012), higher possibility of unemployment (Wen, 2005). The findings of current study echo the results of prior literature related to peer communication, further educational aspiration and social capital. However, it is should be noted that the participants all attributed their risks to their financial hardship. Because the first generation college students accounted for the majority of present higher education, they did not perceive significant influence of the first generation status (Zhang, 2012; Zhu, 2011). One particular risk often identified by researchers is low selectivity of institutions, which undermines students' persistence (Perna & Titus, 2004; Terenzini, Cabrera & Bernal, 2001) and employment (Deng, 2012; Zhu, 2009; Mao, 2007). Although the participants in this research reported they were aware of the disadvantage of their college, they did not perceive it had negative effect on their college experience. On the contrary, because the participants assumed the private college's unfavorable position in job market and took precaution, the perception of low selectivity of private college was deemed as a shared protective factor. The contradiction is supported by the theorists of resilience who highlight resilience and the quality of a factor is context-specific (Luthar & Cicchetti, 2000; Luthar & Cicchetti, 2000).

There has been a great body of literature which contributes to identification of protective factors. Researchers have reached a consensus on the positive effect of internal locus of control, which is a predictor of academic success and persistence (Borman & Overman, 2004; Morales, 2010; Morales, 2012). The current study added vigorous evidence about its powerful influence on students' educational success. Help-seeking strategy (Morales & Trotman, 2011; Morales, 2008) and student-faculty interaction (Cox et al., 2010; Einarson & Clarkberg, 2004; Kuh & Hu, 2001a) are proved to contribute to students' career success in this investigation. In addition, while the Chinese inquiries are still focused on factors identification, western researchers strive to explore the connection in a cluster of protective factors discovered in a particular population. However, the findings of previous literature only contends that the connection exist in the protective factors of similar resource, for example, personal psychological trait. My findings are that factors from environmental and personal asset may collaborate with each other and foster new protective factor. However, more empirical studies are needed to prove and explain the mechanism.

Three models are developed to seize an in-depth understanding of resilience experience: Challenge Model, Compensatory Model, and Protective Model. Each model reflects a distinctive type of interaction between risk and protective factor. In this study, the experiences of participants revealed Compensatory Model and Protective Model. The findings are also in accordance with the theorists' claim that one individual can experience three models of protection (Zimmerman & Arunkumar, 1994). Moreover, this research discovered four common protective factors, and each factor operated in different model in different participant. Now that the Chinese researches rarely touch the models of resilience, this research and findings extend the prior literature by presenting the diverse relationships between protective factors and positive outcome.

Implications

The research has revealed the salient contribution of internal locus of control, financial aids, job-related experience and career planning to students' educational success. The findings have implications for national policy maker and college administrators and teachers. By making joint effort, national policy makers and college administrators are suggested to increase investment in financial aid programs. In private colleges, the teachers should take a new look about the value of part-time job on campus and career guidance program.

The financial aid system for college students is increasingly benefiting more and more students. The percentage of low-income students who have received financial support is still low (Qu, Ji & Qiao, 2017). Given the big population of students in need, it is an imperative to open more channels of financial support. Ministry of Finance (2007) stipulates that the private colleges must spare 4%-6% of their revenue to aid the low-income students so that they can receive appropriation. Statistics shows that most of private institutes which have obtained appropriation fail to fulfill their commitment. Scholars call for effective supervision so that the private colleges carry out the policy and increase investment in financial support for students in need. Another possible resource is social and private endowment, which is budding but does not take up a significant portion in financial aid system. In 2008, the ratio of social and private endowment in colleges' revenue is only 1.79%, and only 1% of the corporates that have ever aided colleges (Chen, 2008). One reason is the individuals and corporates are not motivated to undertake this burden (Qu, Ji & Qiao, 2017). To spur the individuals and corporates' donation in higher education, the tax exemption policy can be applied. For the colleges and universities, it is necessary to establish specialized office and personnel to manage the fund and keep the donors informed. These practices had been proved highly feasible in western counties.

Part-time work on campus is prevalently adopted as an approach to providing income for low-income students in college. In many institutes, there is specialized department staffed with students. Apparently, if the working experience has personnel involved, students will benefit much more than income. The study has found that students could enhance sense of belongings and get access to culture of higher social class through informal interaction with teachers. The psychological and cultural influence greatly contributes to at-risk students' adaption and career aspiration. Off-campus working experience for freshmen is rare and of little educational purpose. When designing job posts for students, the administrator is suggested to take the teacher's involvement into consideration. In this way, this program is expected to support students more profoundly and effectively.

The current study reveals distinguished importance of career planning in low-income students' educational success. When the participants evaluated the opportunity of career development, they considered their present and potential risks and took precautions. In particular, they started their career planning from the first year so that they had adequate time to accumulate the support they needed or adjusted their plan. In China, most of college students receive systematic career guidance since the third year, and the content is focused on job-seeking skills. The implication for career service in college is to set up programs for freshmen or sophomores, which highlights the strategy of career planning. The other significant problem that the administrators are plagued with is the unsatisfactory academic performance of low-income students. A great deal of prior studies has verified the positive influence of academic excellence. Especially for the low-income population in college, high academic performance predicts positive educational outcome. This research reveals that the students are highly motivated to attain high performance because they are aware of its positive role in their career success. In other words, their career planning includes the plans on academic learning. Except for the issue of timing, the course of career guidance may be designed to include instruction on academic learning and its relation with career objectives. This design benefits student by presenting the significance of academic learning in long-term life and developing their autonomy.

Recommendations for Further Research

To better understand the educational resilience of low-income first generation college students, the follow-up researches may be developed in two aspects. First, the future research could include students of public colleges and universities which are mainstream institutions of higher education in China. Three participants in the current study are from private college, and the findings can not be arbitrarily generalized to public counterparts, considering the different experience. Although the public institutions are assumed to have richer resource to support low-income students, prior investigations reveal that they still account for the majority of unemployed graduates. The both the researchers and administrators are still confronted with the solution to the problem. However, the previous inquiries about low-income college students are mainly deficit-oriented and focus on the experience of risks. Researches on educational resilience about students from public universities will bring a complete look at the underrepresented graduates on the whole. Moreover, the findings can provide implications to set up effective supports for students in need. Second, quantitative designs are needed to further understand the protective factors.

Some of protective factors reported in this study are new, for instance, career planning. Quantitative research will sample more students and verify their validity. In addition, the protective factors have dynamic interaction with each other. Powerful investigations are needed to explain the correlations between different protective factors. Furthermore, the perceived factors derive from personal traits and environment. It is suggested that the future study explore the variables contributing to the protective factors. The findings would offer directions for practitioners in college.

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APPENDIX A: INTRODUCTION LETTER

Chen Yinghui
1661 North Shengxin Road
Jiading District Shanghai, 201815
(086)021-39966210

Distinguished Director of Student Affairs:

I am Chen Yinghui working in Shanghai Normal University Tianhua College and I am a doctorate candidate at University of the Pacific, Gladys L. Benerd School of Education in the United States. I am doing a research on low-income and first generation college students' success. The purpose of this study is to explore how low-income students from Chinese private colleges achieve academic and career success.

Your college is chosen as sample institution because its excellence in students cultivation. I am seeking your assistance in recommending students of significant academic achievements. If I identify my research participants here, I will interview them about their educational experiences. Any information can be identified connected with your college and interviewee will be processed by using pseudonym and anonymity. Any of my activity here will not interrupt normal work.

I am deeply convinced that the research will benefit students' development and administration in your college. Thank you for your support.

Shanghai Normal University
Tianhua College
Date:

APPENDIX B: INTERVIEW PROTOCOL

I. **Current situation**

1. Tell me your recent internship?
2. Tell me your recent campus activity?

II. **Work-related experience**

3. Describe your work-related experience.
   a. How did you get these jobs?
   b. The responsibility and challenge of these jobs.
   c. How do you think of these jobs?
   d. Tell me the most memorable experience about your work?
   e. Tell me the most important experience about your work?

III. **Academic Learning in college**

4. Tell me your study in college.
   a. Tell me the most memorable experience about your learning?
   b. Tell me the most important experience about your learning?

IV. **Protective factors**

5. Tell me about your relationship with your family.
6. Tell me about persons who influenced you most on your study and work.
7. Tell me your co-curricular and extracurricular activities.
8. Tell me about the relationship with your classmates and friends.
9. What are your short-term and long-term plans?

V. **Wrap up**

10. Anything you want to add or ask me?

APPEDNIX C: **INFORMED CONSENT**

Educational Success of Low-Income and First Generation College Students in Private Colleges of China

You are invited to participate in a research study which will involve educational success of low-income and first generation college students in Chinese private college. My name is Chen Yinghui and I am a Doctor candidate at the University of the Pacific, Gladys L. Benerd School of Education. You were selected as a possible participant in this study because of your educational accomplishment in college.

The purpose of this research is to explore how low-income and first generation college students from Chinese private colleges achieve academic and career preparation. If you decide to participate, you will be asked to receive two interviews and offer photocopies of you job resume, awards certificates and unofficial transcripts. Your participation in this study will last three months.

The possible risk for this study is minimum except for time commitment. There are some benefits to this research, particularly in understanding low-income and first generation college students' experience.

If you have any questions about the research at any time, please call me at *13761019451.* If you have any questions about your rights as a participant in a research project please call my dissertation chair, Dr. Ronald Hallett (209) 946-2265 or the Research & Graduate Studies Office, University of the Pacific (209) 946-7716.In the event of a research-related injury, please contact your regular medical provider and bill through your normal insurance carrier, then contact the Office of Research & Graduate Studies.

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission. Measures to insure your confidentiality are using pseudonyms for you and all your related information. The data obtained will be maintained in a safe, locked location and will be destroyed after a period of three years after the study is completed.

Your participation is entirely voluntary and your decision whether or not to participate will involve no penalty or loss of benefits to which you are otherwise entitled. If you decide to participate, you are free to discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled.

Your signature below indicates that you have read and understood the information provided above, that you willingly agree to participate, that you may withdraw your consent at any time and discontinue participation at any time without penalty or loss of benefits to which you are otherwise entitled, that you will receive a copy of this form, and that you are not waiving any legal claims, rights or remedies.

You will be offered a copy of this signed form to keep.

Signature Date

__________________________ ______________________________

APPENDIX D: **INFORMED CONSENT** (MANDARIN VERSION)

知情同意书

中国民办高校贫困第一代大学生韧性研究

诚恳邀请您参加中国民办高校第一代贫困大学生韧性研究。我的名字是陈英慧，我是美国太平洋大学 Gladys L. Benerd 教育学院的博士生。您被选为研究对象的原因是考虑到您在校期间所取得的成绩。

本研究的目的是探讨中国民办大学里贫困第一代大学生所取得的成绩和职业发展经验。如果您决定参加，您会被采访两次，并且出示您求职简历、荣誉证书、非正式成绩单的复印件。这次研究的持续时间是三个月。

本研究除了需要您付出时间之外，风险是微乎其微的。本研究的意义重大，特别是它能增进研究者对于贫困第一代大学生大学经历的理解。如果您任何时间对本研究有任何问题，请打电话给我，我的电话是 13761019451。如果你对于作为研究对象的权益有任何问题，可以致电我的论文导师 Ronald Hallett 博士，电话是(209) 946-2265 或者致电太平洋大学研究办公室，电话是 (209) 946-7716. 如果研究过程中以有任何相关伤害，请联系您常用的医疗机关和保险机构，并联络太平洋大学研究办公室。

本研究涉及到的任何可以识别您身份的信息都会实施保密措施，只有在您允许的情况下才能公开。保密措施包括对您的姓名和相关信息实施假名。采集的数据会被保存在安全的地点，研究结束三年后被销毁。

您的参与完全是处于自愿，您的决定不会涉及任何惩罚或合法利益的损害。如果您决定参加了，中途任何时候都可以退出，结果不会涉及任何惩罚或合法利益的损害。

您在下方的签名说明您已经阅读并理解了以上信息并愿意参与本研究。您可以随时撤回同意书中断参与研究，结果不会涉及任何惩罚或合法利益的损害。您会同样持有一份知情同意书，但您没有放弃任何合法申诉、权益或援助。

您会收到一份亲笔签名的知情同意书。

签名 日期

_______________________ _______________________