Credentialism and Career Aspirations: How Urban Chinese Youth Chose High School and College Majors

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This article explores how graduates of a junior high school in Dalian City, Liaoning Province, China, chose their high school and college major subject of study and the extent to which their majors fit with their work trajectories. We found that most interviewees considered the likelihood of a major and degree leading to better job opportunities more important than how the major fit with their personal interests. However, the unpredictability of the market economy in China made it difficult to anticipate which majors would lead to more lucrative jobs, and many eventually found work that did not match their majors.

While most Chinese citizens were assigned jobs between the 1950s and 1980s, they have been free to choose their own career paths since the late 1990s, when the Chinese state stopped assigning jobs to most citizens, and new values of self-actualization and self-fulfillment began to permeate discourses about career development (Hanser 2008; Hoffman 2008; Kim et al. 2010). At the same time, however, “credentialed capitalism” increasingly prevailed, introducing intense competition from kindergarten through college and making education key for upward mobility and career opportunities (Bian 2002; Kipnis 2011).

Since China’s economic reforms began in the 1980s, fast-changing structures of opportunity in China have often been unpredictable in the ways they created losers and winners. Technological, social, economic, and geopolitical changes caused some fields to become obsolete (e.g., those associated with particular kinds of technology or foreign languages such as Russian) or oversaturated (e.g., less specialized and more elementary levels of accounting, computer, and foreign-language fields) over the course of just a few years. As a result, in addition to dealing with a highly competitive educational system and labor market, Chinese youth have faced risks associated with the vagaries of the labor market. Although processes by which college students choose their major subject of study in school1 and careers after school have been studied

1 Throughout this article, we use the short term “major” to refer to the major subject or discipline of study in school that a student selected.
extensively in Western countries (Astin 1993; Montmarquette et al. 2002; Malgwi et al. 2005; Porter and Umbach 2006), processes by which Chinese students do so are not well understood.

This article will shed light on how a cohort of Chinese students who were in eighth or ninth grade at a Dalian junior high school in 1999 chose their high school and college majors and jobs between 1999 and 2014. This is the first study of the school-to-work transition of the first generation born after China’s economic reforms and one-child policy began in 1979. Our research participants were born between 1982 and 1986 and made their educational and career decisions just as secondary and tertiary education expanded and diversified in line with the rapid changes accompanying the economic reforms (Bai 2006; Li et al. 2008). Our longitudinal approach enabled us to start out with a cohort of eighth and ninth graders with a wide range of possible future majors and job choices, and then revisit them when they were young adults, to see what majors and jobs they had chosen. Major choices are very much tied to work opportunities, but these two have been rarely studied together. We address this gap by looking at how major choices can not only affect work opportunities, but also be affected by how youth and their parents imagine those opportunities.

**Major Choice: Interest Congruence and Economic Returns to Education**

Psychological studies of US college students have found that interest in the content of a major, as well as a belief that the major could potentially lead to work that they felt they would enjoy, were rated by college students as the most important factors they considered when choosing majors (Adams et al. 1994; Malgwi et al. 2005; Beggs et al. 2008). The vocational psychology literature emphasizes links between interest, personality, and motivation (Larson et al. 2002). Interest (conceptualized as an expression of personality) and self-efficacy (conceptualized as individuals’ perceptions of their own abilities) have been described as the main motivators for students’ choices of major in Western societies (Hackett and Betz 1981; Lent et al. 2000). John L. Holland’s (1973, 1985, 1997) theory of “personality-environment fit” suggests that major choice will be predicated upon the compatibility between the environment of the major and certain dominant personality traits in a student, and has been widely used in studies examining interest congruence (e.g., Astin 1993; Smart et al. 2000; Porter and Umbach 2006). In this model, choice of vocation is explained as an expression of personality. Holland’s six personality scales (realistic, investigative, artistic, social, enterprising, and conventional) and a scale of students’ political views were found to be most predictive of US students’ major choice, even after controlling for other factors such as SAT scores or self-efficacy (Porter and Umbach 2006).
Unlike psychologists who have emphasized the role of interest and personality in US students’ choices of major, economists have focused more on how US students make major and subsequent career choices based on future economic returns, the perceived probability of success, the effort needed to complete the major, the expected earnings after graduation, and the alternative earnings if the student failed to complete the degree (Beggs et al. 2008; Montmarquette et al. 2002).

Anthropologists and sociologists have found that, within the United States, students from families of lower socioeconomic status were more likely than students from families of higher socioeconomic status to see education as a means of securing them a job with high financial payoff in the future, because they viewed choosing to attend college rather than enter the workforce directly after high school as an investment (Brand and Xie 2010). This was also the case for “voluntary immigrants” who migrated by choice in pursuit of a better life to the United States (Ogbu and Simons 1998). John Ogbu (2003, 2008) argued that first-generation “voluntary immigrants” were more likely to believe that education was a feasible route to upward mobility, and therefore conform to the education system, than “involuntary immigrants” such as African Americans and Native Americans, whose families had experienced long histories of discrimination that made them skeptical of claims that education would be a feasible route to upward mobility for them. “Voluntary immigrants” viewed education as a means for increasing future earning potential and were more likely to choose majors that seemed likely to lead to more and better job opportunities, regardless of how interesting they found those majors.

Asian American immigrants were found to be particularly strategic in choosing majors and jobs. Faced with potential discrimination and other disadvantages in the US job market due to their minority status, Asian Americans were more likely to choose majors that would prepare them to enter fields in which hiring and promotion were more dependent on educational achievement and less on other kinds of social capital, and more likely to have higher financial payoffs, such as engineering, physical and biological sciences, computer science, and mathematics, rather than the social sciences, arts, and humanities (Song and Glick 2004). This has been called “strategic adaptation” (Xie and Goyette 2003), whereby education is viewed as instrumental and serves the purpose of achieving higher socioeconomic status. Asian American parents were found to be playing a key role in their children’s occupational choices, pushing their children into particular majors that would maximize their prestige and success (Kim 1993; Xie and Goyette 2003). In contrast, studies of mostly white US college students found that parents were not particularly influential in their children’s choices of major (Adams et al. 1994; Strasser et al. 2002).
School-to-Work Transition in China

In China, rapid changes caused by the economic reforms and one-child policy that began in 1979 created opportunities for upward mobility that in some ways resembled those available to new immigrants in the United States (Fong 2004). The cohort of singletons (people with no siblings) born under the one-child policy was especially affected by China’s rapid integration into the global neoliberal system (Fong 2004, 2011). Upward mobility was increasingly dependent on educational attainment in the post-reform era (Bian 2002; Fong 2004), and a prestigious bachelor’s degree was considered the best route to the ongoing production of capital through high-paying “respectable” jobs, prestige, and connections (Kipnis 2011). Woronov (2011) found that vocational high school graduates, most of whom scored too low on the high school entrance exam to enter college-prep high schools, were stigmatized and formed a new underclass considered to be lacking in morality and quality.

In response to the need for a workforce with the skills to hasten China’s economic development and the increasing demand for postsecondary education among the generation born under China’s one-child policy, who were raised with higher aspirations and more parental investment than previous generations (Fong 2004), the government greatly expanded opportunities for education in vocational high schools as well as in college programs of all kinds, and this resulted in rapid diploma inflation (Bai 2006; Hansen and Woronov 2013). China borrowed from the German dual-system model, the Singaporean vocational model, and the US Career and Technical Education system to prepare vocational high school students for their jobs through apprenticeships and hands-on training (Yu 2005). However, unlike their counterparts in Germany or the United States, Chinese vocational high school graduates did not have a comparative advantage over other degrees in their own occupational domain for which they were trained (Li et al. 2008). In Chinese vocational high schools, the quality of the teaching staff was often low, the training was often irrelevant to the work vocational graduates ended up doing, and the graduates had trouble competing with college graduates (many of whom had the same majors as vocational high school graduates) on the job market (Hansen and Woronov 2013).

Parents therefore pushed our research participants to study hard to get into college-prep high schools and regular bachelor’s degree programs, which they believed would be the most likely path to upward mobility (Fong 2004, 2011). Chinese parents emphasized the utilitarian value of education and work more than their Western counterparts (France et al. 1991). Parents of our research participants “talked reason” (jiang daoli) to their children, explaining why their children should study. During these discussions, which began when children were in primary school and lasted throughout their
middle school, high school, and college years, parents often described future potential earnings and upward mobility as the main reasons their children should study hard to get into college (Kim and Fong 2013).

Though they were good at explaining why studying was important for future socioeconomic success, most of our research participants’ parents (born mainly in the 1950s and 1960s) could not give their children more specific advice about which majors and careers they should choose (Zhou et al. 2012). None had much experience with job selection or searches, as most of their jobs were assigned by the state (Bian 1997). This had changed by the late 1990s, when graduates became responsible for their own job searches, which broadened the choices they could make in terms of career as well as the routes by which to obtain jobs. Such transformations have drastically changed workplace attitudes and behaviors in China (Yi et al. 2010). Discourses in the new market economy in China encourage youth to pursue jobs that they are interested in, give them autonomy, and provide opportunities for career advancement and personal fulfillment (Hanser 2008; Kim et al. 2010). Lisa Hoffman (2010) argued that Chinese job seekers began shifting from passively waiting for job assignments from the state to actively using their job searches to pursue middle-class self-development in the 1990s, based on her study of job seekers who were in their 20s to 40s in 1995–96 (when the bulk of Hoffman’s research was conducted in Dalian). Many considered the development of white-collar careers a way to contribute to the nation through professional labor, which Hoffman (2010) terms “patriotic professionalism.” Cheng Li (2010) argues that a middle class began emerging in China after the economic reforms, in contrast to the lack of a distinct socioeconomic middle class in the Maoist era (1949–76). Although what constitutes the “middle class” in China has been debated, and this group has been described as lacking class identity or consciousness because their backgrounds and occupational experiences are so diverse, it is clear that the diversification of the market economy and the expansion of higher education have made middle-class status possible for our research participants’ generation in ways that were far less possible for older generations (Cheng Li 2010; Wang and Davis 2010).

Chinese youth are thus faced with a system fraught with contradictions such as the incompatibility between the intensely competitive and rigidly hierarchical educational system in China and values such as interest, autonomy, and choice that dominate current discourses in the market economy. In this article, we explore how members of this unique singleton generation deal with these contradictions by strategically choosing majors and careers. Specifically, we ask: (1) How and why did our research participants choose their college and vocational high school majors? (2) How, why, and to what extent did their work trajectories match or not match their college and vocational high school majors? We ask whether the theoretical frameworks developed in the vocational psychology literature around personality and
interest are central to major and career choice for our research participants, or whether factors related to the educational system, job market, market economy, and the competitiveness, heavy parental investment, high aspirations and educational attainment (see table 1), and diploma inflation common among the singleton generation are more salient in youths’ constructions of their trajectories.

Data and Methods

This article is based on a longitudinal mixed methods project, drawing mainly on surveys of 738 respondents conducted in 1999 when they were eighth or ninth graders (age 13–17) at a junior high school in Dalian, a coastal city in Liaoning Province, China, a resurvey of 406 of them in 2012–13, and interviews with a representative subsample of 48 of them in 2012–14, when they were ages 26–30 (see table 1 for descriptive statistics about both the interview sample and the survey sample). Our research participants were on average 28 years old in 2012, and thus 10–30 years younger than participants in Hoffman’s (2010) study. Our research participants entered the job market during the first decade of the twenty-first century, when competition for middle-class work had reached unprecedented intensity due to the competitiveness, parental investment, diploma inflation, and high aspirations and educational attainment among China’s first generation of only children, who had to compete against a whole generation of fellow singletons who were almost all raised with similarly high aspirations and parental investment, unlike generations prior to the one-child policy, in which many daughters and later-born or less likable sons were less competitive because they had been raised with lower aspirations and parental investment by parents who favored their firstborn or more likable brothers (Fong 2004). By 2014, when all our interview and survey data had been collected, our 271 survey respondents (including 44 of the 48 interviewees) who answered our survey question about when they started their first jobs had been working for an average of 8 years.

The junior high school from which participants were originally recruited was purposively selected (e.g., Creswell 2014; Patton 2015) because it included proportions of various groups defined by socioeconomic status, demographics, and academic achievement levels that were similar to those of the population of Dalian City attending junior high schools in 1998–99. Our study examines the educational and occupational choices these research participants made between 1999 and 2014. We used a combination of sequential mixed methods and purposive sampling strategies (Maxwell 2013; Creswell 2014; Patton 2015) to select the interviewees. Our interview subsample ($n = 48$) was selected from the 406 study alumni who were living in
## Table 1
Descriptive Statistics from Our 2012–13 Survey and 2012–14 Interviews

<table>
<thead>
<tr>
<th>Variables</th>
<th>Survey Sample</th>
<th>Interview Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>((N = 406))</td>
<td>((n = 48))</td>
</tr>
<tr>
<td>Female</td>
<td>406</td>
<td>48</td>
</tr>
<tr>
<td>Married</td>
<td>401</td>
<td>48</td>
</tr>
<tr>
<td>Number of children</td>
<td>406</td>
<td>48</td>
</tr>
<tr>
<td>Childless</td>
<td>326 (80%)</td>
<td>40 (83%)</td>
</tr>
<tr>
<td>At least 1 child</td>
<td>80 (20%)</td>
<td>8 (17%)</td>
</tr>
<tr>
<td>Highest degree attained:(^a)</td>
<td>384</td>
<td>48</td>
</tr>
<tr>
<td>Junior high school</td>
<td>10 (3%)</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>Vocational high school</td>
<td>77 (20%)</td>
<td>10 (21%)</td>
</tr>
<tr>
<td>Private high school</td>
<td>1 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Regular college-prep high school</td>
<td>2 (1%)</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>Adult education associate</td>
<td>88 (23%)</td>
<td>13 (27%)</td>
</tr>
<tr>
<td>Regular associate</td>
<td>12 (3%)</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>Adult education bachelor’s</td>
<td>83 (22%)</td>
<td>8 (17%)</td>
</tr>
<tr>
<td>Regular bachelor’s</td>
<td>103 (27%)</td>
<td>12 (25%)</td>
</tr>
<tr>
<td>Master’s</td>
<td>8 (2%)</td>
<td>2 (4%)</td>
</tr>
<tr>
<td>Highest degree respondent’s mother attained:</td>
<td>385</td>
<td>46</td>
</tr>
<tr>
<td>Junior high school or less</td>
<td>225 (58%)</td>
<td>30 (65%)</td>
</tr>
<tr>
<td>High school</td>
<td>134 (35%)</td>
<td>12 (26%)</td>
</tr>
<tr>
<td>College</td>
<td>26 (7%)</td>
<td>4 (9%)</td>
</tr>
<tr>
<td>Highest degree respondent’s father attained:</td>
<td>381</td>
<td>44</td>
</tr>
<tr>
<td>Junior high school or less</td>
<td>199 (52%)</td>
<td>25 (57%)</td>
</tr>
<tr>
<td>High school</td>
<td>130 (34%)</td>
<td>14 (32%)</td>
</tr>
<tr>
<td>College</td>
<td>52 (14%)</td>
<td>5 (11%)</td>
</tr>
<tr>
<td>Current job:</td>
<td>278</td>
<td>44</td>
</tr>
<tr>
<td>Worker</td>
<td>44 (16%)</td>
<td>9 (20%)</td>
</tr>
<tr>
<td>Small business owner with 2 or fewer employees</td>
<td>18 (6%)</td>
<td>4 (9%)</td>
</tr>
<tr>
<td>White-collar job</td>
<td>169 (61%)</td>
<td>24 (55%)</td>
</tr>
<tr>
<td>Mid-level manager</td>
<td>31 (11%)</td>
<td>5 (11%)</td>
</tr>
<tr>
<td>High-level manager or cadre or owner of business with more than 2 employees</td>
<td>2 (1%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Not working</td>
<td>11 (4%)</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>Other (e.g., full-time student)</td>
<td>3 (1%)</td>
<td>1 (2%)</td>
</tr>
<tr>
<td>Vocational high school degree major-current job match:(^b)</td>
<td>167</td>
<td>25</td>
</tr>
<tr>
<td>Yes</td>
<td>35 (21%)</td>
<td>4 (16%)</td>
</tr>
<tr>
<td>A little</td>
<td>26 (16%)</td>
<td>4 (16%)</td>
</tr>
<tr>
<td>No</td>
<td>106 (63%)</td>
<td>17 (68%)</td>
</tr>
<tr>
<td>Associate degree major-current job match:(^b)</td>
<td>142</td>
<td>22</td>
</tr>
<tr>
<td>Yes</td>
<td>28 (20%)</td>
<td>2 (9%)</td>
</tr>
<tr>
<td>A little</td>
<td>32 (23%)</td>
<td>8 (36%)</td>
</tr>
<tr>
<td>No</td>
<td>82 (58%)</td>
<td>12 (55%)</td>
</tr>
<tr>
<td>Adult Education Bachelor’s degree major-current job match:(^b)</td>
<td>74</td>
<td>8</td>
</tr>
<tr>
<td>Yes</td>
<td>17 (23%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>A little</td>
<td>21 (28%)</td>
<td>5 (63%)</td>
</tr>
<tr>
<td>No</td>
<td>36 (49%)</td>
<td>3 (38%)</td>
</tr>
<tr>
<td>Regular bachelor’s degree major-current job match:(^b)</td>
<td>91</td>
<td>14</td>
</tr>
<tr>
<td>Yes</td>
<td>29 (32%)</td>
<td>5 (36%)</td>
</tr>
<tr>
<td>A little</td>
<td>24 (26%)</td>
<td>3 (21%)</td>
</tr>
<tr>
<td>No</td>
<td>38 (42%)</td>
<td>6 (43%)</td>
</tr>
</tbody>
</table>

\(^a\) No respondents had a keypoint college-prep high school degree or doctorate as a terminal degree.

\(^b\) For the questions about matches between majors and current jobs, we used data from a 2013–14 resurvey in cases where the respondent did not answer those questions on the 2012–13 survey.
Dalian and had not spent more than a month outside of China when they responded to the 2012–13 survey. First, Fong put phone numbers of all 406 of those study alumni on randomly ordered lists and went down each list, selecting the first 13 males and 13 females who consented to interviews. This ensured that we would have a random subsample of interviewees from the larger survey sample. To maximize the extent to which the subsample of 48 would be representative of the larger sample of 406, she then purposively selected from this list an additional 11 males and 11 females who had previously expressed willingness to be interviewed and had demographic and socioeconomic characteristics (e.g., their parents’ educational attainment in 1999, their own educational attainment by 2012–13, and whether they had a child by 2012–13) that, when combined with the characteristics of the randomly selected interviewees, allowed us to end up with a subsample of 48 in which the proportion with each combination of characteristics was similar to the proportion with that combination in the larger sample of 406 (see table 1).

Our interview sample was thus nested within our survey sample, and we used purposive sampling of 22 respondents in addition to the random sampling of the initial 26 participants to add cases based on specific quotas so that characteristics were similar to the survey sample, in accordance with the sampling approach described by Patton (2015). The original surveys were collected in 1999 when Fong taught English and conducted participant observation between 1998 and 2000 in our research participants’ junior high school and in the homes of some of the survey respondents and their friends, neighbors, and classmates between 1998 and 2000, in the summers of 1997, 2002, and 2014, and every summer between 2004 and 2012 (see Fong 2004, 2011). The strong relationships Fong had established with our research participants had persisted over time, and Fong had maintained contact with most of them even when they lost touch with each other. Our analyses exclude those who at the time they completed the 2012–13 survey were living elsewhere in China or in other countries instead of in Dalian, had spent more than a month abroad, and/or had not responded to questions about where they were living or how much time they had spent abroad, because the diversity of child-rearing, education, and work experiences and expectations they may have had in a wide range of other Chinese cities and other countries worldwide, partly documented in Fong (2011), could skew findings about the 406 of their former classmates who at the time they completed the 2012–13 survey were living in Dalian and had not left China for more than a month. All statistical data in this article are from the 2012–13 survey unless otherwise noted. Though Fong lost touch with most of the 1999 survey respondents between 2000 and 2007, she and her research assistants started getting back in touch with them in 2008, starting with the 92 with whom she had stayed in touch between 2000 and 2007 and with others whose families were still using the landline phone numbers they had given her in 1999. These were asked to help us find the current contact information of their former classmates, and all who were in Dalian were invited to class reunions organized by Fong in Dalian every year between 2008 and 2014. Most survey respondents had kept in continuous contact with at least a few of their classmates, and some had kept in touch with most of their classmates.

Four other males and six other females who were randomly selected did not consent to audio-recorded interviews and were therefore not interviewed.

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2 Of the 785 students enrolled in eighth or ninth grade at the junior high school in 1999, 738 completed the 1999 survey. Of these 738, 571 completed at least part of the 2012–13 survey. However, our analyses exclude those who at the time they completed the 2012–13 survey were living elsewhere in China or in other countries instead of in Dalian, had spent more than a month abroad, and/or had not responded to questions about where they were living or how much time they had spent abroad, because the diversity of child-rearing, education, and work experiences and expectations they may have had in a wide range of other Chinese cities and other countries worldwide, partly documented in Fong (2011), could skew findings about the 406 of their former classmates who at the time they completed the 2012–13 survey were living in Dalian and had not left China for more than a month. All statistical data in this article are from the 2012–13 survey unless otherwise noted. Though Fong lost touch with most of the 1999 survey respondents between 2000 and 2007, she and her research assistants started getting back in touch with them in 2008, starting with the 92 with whom she had stayed in touch between 2000 and 2007 and with others whose families were still using the landline phone numbers they had given her in 1999. These were asked to help us find the current contact information of their former classmates, and all who were in Dalian were invited to class reunions organized by Fong in Dalian every year between 2008 and 2014. Most survey respondents had kept in continuous contact with at least a few of their classmates, and some had kept in touch with most of their classmates.

3 Four other males and six other females who were randomly selected did not consent to audio-recorded interviews and were therefore not interviewed.
participants by 2014 made most of those she asked for interviews willing to provide them.

Fong conducted audio-recorded interviews in Mandarin Chinese (8 in person and the rest over the phone) with the interviewees. Each interview lasted about an hour; some interviews were conducted at one sitting, while others were divided between two or three occasions because the interviewee’s schedule constraints caused the first interview to end before all the questions on the interview protocol could be asked, because follow-up questions needed to be asked to clarify and elaborate upon the interviewee’s previous interview or survey responses, or because additional questions were added to the interview protocol and had to be asked of interviewees who were first interviewed before those questions were added. All interviews were audio-recorded with the consent of the interviewees and then transcribed and translated into English. An initial examination of the transcripts did not show any differences between the phone and face-to-face interviews, so we did not organize them separately. The interviewees had already formed an open and trusting relationship with Fong and were thus able to form a conversational partnership in which the discussion was shaped by both interviewer and interviewee (Rubin and Rubin 2012). During the interviews, Fong aimed to achieve “empathic neutrality,” which has been defined as “understanding a person’s situation and perspective without judging the person—and communicating that understanding with authenticity to build rapport, trust, and openness” (Patton 2015, 457). Though Fong (a Chinese American native speaker of Mandarin Chinese with native-level fluency in English who grew up in, studied in, and is now based in the US) conducted the interviews, Kim (a Korean with near-native Mandarin Chinese language proficiency with native-level fluency in English who grew up in France, studied in France, the UK, and the US, and is now based in the UK) and Brown (an African American native speaker of English with high Mandarin Chinese language proficiency who grew up in, studied in, and is now based in the US) worked with Kim to code, analyze, and write about the interview and survey data. We were thus able to draw on our diverse backgrounds to triangulate between our different cultural and linguistic perspectives and check and balance each other’s biases as we interpreted the data.

The interviews were semistructured, and interviewees were asked about how they chose their majors during high school and college, what they liked and disliked about their majors, how they found their first and subsequent jobs, and reasons for any job changes. Particular attention was paid to how they thought about work and the factors that shaped their choices of majors and jobs, and how and why they liked or disliked their majors and jobs. We also used the survey data to explain broader patterns that the interview sample was too small to explain.
Data Analysis

As outlined in Patton (2015) and Flick (2014), we used a combination of inductive and theoretical thematic analyses to detect etic and emic codes, categories, and themes. We first used open coding to detect emerging categories or themes across cases in the first few cases and checked for those in the remaining cases. Next, we focused on certain key parts of the text while further refining and defining the categories. Categories were created based on interviewees’ own words and concepts defining how they viewed their school-to-work transition, with more attention paid to the relationship between the categories. These were further developed into themes that describe broader patterns and processes (Rossman and Rallis 2012). In the following step, we coded each case individually conducting a case-by-case analysis, also known as “selective coding.” We added a last step in order to examine whether and how the themes differed across groups, in particular across more or less educated interviewees. After several rounds of iteration, we came up with the final themes of fierce competition and credentialism, socialization into credentialism, the irrelevance of majors, and gambling on the future.

Regular team meetings were held between the authors to discuss their understanding of the interview content throughout the data collection and analysis process. All interviews were read carefully line by line by the team to discuss inconsistencies and to check for quality. Fong was able to follow up with the respondents to clarify certain points in the interview that were unclear or discrepant from the survey data. In addition to serving as validity checks, the survey data also helped contextualize our findings from the interview data, and to illustrate and extend certain points that emerged from the narratives. These steps ensured trustworthiness and rigor as suggested by Merriam (2015) and Rossman and Rallis (2012).

Findings

Fierce Competition and Credentialism

For the 36 interviewees who got college degrees (14 regular bachelor’s degree holders, and 22 adult education bachelor’s or associate degree holders), decisions about which college majors to select as their top choices were based on a balance between strategies for getting into the most prestigious college they could get into based on their scores, and strategies for getting into majors that would make it more likely for them to get desirable work after graduation. The process and logic of students’ major choices in vocational high schools, associate degree programs, adult education bachelor’s degree programs, and regular bachelor’s degree programs were comparable to each other, with the key difference being that associate degrees or adult education associate or bachelor’s degrees were less prestigious and thus less competitive.
than regular bachelor’s degrees. However, the heavy parental investment, diploma inflation, and high aspirations and educational attainment that almost every child born under China’s one-child policy had been raised with meant that the number of white-collar jobs available was far smaller than the number of youth in their generation who wanted them, and a regular bachelor’s degree was the most likely to lead to a high-paying, prestigious, and secure white-collar job upon graduation (Fong 2004). Therefore, admission to a regular bachelor’s program was the first priority for all students regardless of the major chosen. For example, Liu Xin, who majored in information management and information systems in her regular bachelor’s degree program, explained how her low score made her choose a major she knew little about and did not feel very attracted to: “I didn’t do very well in the college entrance exams, but my Ma really wanted me to go to a regular bachelor’s degree program. At that time, my score was more than enough to get into a very good associate degree program, but she hoped for me to study in a regular bachelor’s degree program. My score wasn’t ideal for applying to a regular bachelor’s degree program, so I checked the college major guidebook and looked for majors with a lower score requirement.” Liu Xin knew from practice tests that she was unlikely to get into a more popular and thus more selective major at any regular bachelor’s degree program, so in order to fulfill her mother’s wishes for her to enter into a regular bachelor’s degree program, she had to choose a major she did not understand or anticipate that she would like. “I had absolutely no idea what exactly I was going to learn when I got into that major,” she said, “Information Management and Information Systems sounded too abstract to me.” She described herself as someone who “loves dealing with paperwork but not computer technology,” so her major did not fit her preferences. This was also the experience of the majority of our interviewees who had felt compelled to choose less selective majors they were not interested in—such as those with the most available spots and fewest applicants, and available at a college with an admission cutoff below the college entrance exam score they believed they would get—to improve their chances of admission to a better college.

The allocation of majors by test scores made this process even more achievement-driven and competitive. Those who scored higher were allowed into more popular majors, but applicants did not know for sure what their test scores would be prior to applying for admission to a particular major. “After we took the test, every person got an answer sheet, and then we estimated our scores ourselves. After we estimated, we would see, oh, what major programs at what schools could you get into with your score, and then by doing this, we were able to pick our majors,” explained Li Jing, a woman who had majored in urban planning at her regular bachelor’s degree program. The few who were confident that their exam scores would be high and/or willing to risk not getting into any bachelor’s degree program picked their top-choice
majors in their top-choice colleges, as in the case of Chen Zuo, a regular bachelor’s degree holder who was currently working in a hospital and had majored in clinical medicine. “I chose it because of job prospects with this major. Also, I thought it would be more convenient for my family if I became a doctor,” he said. Even in these cases, however, the choice of major was still driven mostly by a desire for better job prospects rather than by personal interest in the content of the major.

While majors in fields such as accounting, law, public relations, and business administration were offered in vocational high schools and associate degree and adult education bachelor’s degree programs as well as regular bachelor’s degree programs, most jobs in these fields were reserved for regular bachelor’s degree holders. Many of those in such majors who lacked regular bachelor’s degrees therefore had to get jobs that did not fit their majors because they were not competitive enough for jobs matching their majors. For example, Jiao Jing majored in environmental monitoring and management in vocational high school, started working as a factory after graduating from high school, but also entered an adult education associate degree program in business management part-time because she struggled to find a job with just a vocational high school degree: “I graduated from the vocational high school and started looking for jobs, but it wasn’t easy since I did not have a decent degree,” she said. But over 6 years after getting the adult education associate degree, she was still working in the factory where she had started off as a vocational high school graduate: “We are working on fire control products. I started with welding boards, soldering those circuit boards, which was totally irrelevant to what I studied. Then I got promoted to a management position, and began doing quality control. Anyway, none of these fit my majors.”

In addition to the difficulty of finding jobs in fields where less prestigious college degree holders had to compete against more prestigious degree holders, less competitive degrees often provided lower quality education. “I only attended a few classes, and the teachers graded very generously and made everyone pass the exam,” explained Jiao Jing. She added: “For students who were not good at study just like me, we simply wanted to get a diploma.”

Because they were motivated primarily by credentialism and not by interest in the major or a strong desire to learn particular skills and knowledge, these research participants chose their majors primarily because these majors seemed like they would be easier than other majors. Feng Hao, who was working as a waiter in a hotel and had majored in computer networks in vocational high school, explained how carelessly he chose his major in materials management in an adult education associate degree program: “Actually, I felt it wasn’t too hard,” he said. “Because at that time I was susceptible to my classmates’ persuasion, I just went to enroll in this college. By the time I attended this college, I was already working. . . . When I returned home, there was very
little time to study anything. At that time, I chose my materials’ major because there were fewer exam questions. These exams only seemed to have ten to eighteen questions, more or less. Compared to other majors, those exam questions were relatively few.”

Regardless of whether they went on to college or not, most vocational high school graduates expressed their regret for not scoring high enough to get into college-prep high schools because they felt that attending vocational high school limited their present career choices more severely than anything else did. When asked whether they would make the same choices if they could pick their major and job again, Chen Qian, a male vocational high school graduate who worked as a driver at a state-owned enterprise for 8 years said, “Now I always regret that I did nothing in junior high school. It might sound like complaints and grudges, but my grades in 7th and 8th grade were pretty fine. But in 9th grade, our homeroom teacher changed. I really liked the homeroom teacher in my 7th and 8th grade, but I did not like the new homeroom teacher very much. So I stopped studying. I did not study at all during 9th grade. Now I am very regretful.”

Socialization into Credentialism with Limited Parental Guidance

In spite of their parents’ deep involvement with their education, most of our interviewees did not recall getting much guidance from parents about the majors they should choose. This contrasted sharply with findings of studies conducted on Asian Americans that found parents to be deeply involved, almost dictatorial about their children’s choices of majors and jobs (e.g., Kim 1993; Xie et al. 2003). Among our interviewees, 11 out of 48 said that their parents had influenced them in choosing their majors and subsequent jobs, but this process was usually described as one where the interviewee did not have a very strong opinion about the major chosen and simply followed their parents’ advice for securing a better future. Of the 11 whose majors had been chosen by their parents, only one (Wang Yu, who we will discuss more below) described some form of disagreement with his parents (who persuaded him to choose a culinary arts major in vocational high school instead of the driving or car repair major he preferred, because they thought that driving and car repair would be too dangerous). Unlike most Asian Americans described in other studies, who have described conflicts between their own desire to choose less potentially lucrative majors they felt they would enjoy and their parents’ desire for them to choose majors that were more likely to lead to more and better job opportunities, most of our interviewees prioritized majors that were more likely to lead to more and better job opportunities over majors that fit their personal interests, even when their parents were not directing their choices.

Like the Chinese youth in Zhou’s study (2012), our interviewees suggested that the lack of parental input in their choices of major was due to par-
ents’ low education levels and their lack of experience with finding jobs, as most of our interviewees’ parents had been assigned jobs by the state after completing their education rather than having to search for jobs on their own, and, among interviewees who answered the parental education survey question in 1999, 30 of interviewees’ 46 mothers and 25 of their 44 fathers had no more than a junior high school degree (see table 1). As a result, parents could not offer informed suggestions. The only guidance our interviewees got from their parents was to get into the best school they could and obtain high scores in order to achieve this goal.

Moving Away from Jobs That Fit One’s Major to Pursue Personal Interests

Our study did not support the theoretical frameworks developed in the Western literature serving to explain the choice of vocation as an expression of personality, and the salience of personal interest was absent from most interviewees’ justifications of their major and career selection. As observed earlier, credentialism and an economic rationale for finding jobs offering better pay, prestige, and security governed our interviewees’ choices.

Major-job fit was low among those who answered questions about that fit on our survey between 2012 and 2014 (see table 1). Of our 167 respondents with vocational high school degrees, 63 percent reported a mismatch between those degrees and current jobs, while 21 percent reported a match; of our 142 respondents with associate degrees, 58 percent reported a mismatch between those degrees and current jobs, while 20 percent reported a match; among our 165 respondents with bachelor’s degrees, 45 percent reported a mismatch between those degrees and current jobs, while 28 percent reported a match. The mismatch reported by our research participants at each level of educational attainment is much higher than among the 124,063 bachelor’s degree holders in a nationally representative US study, of whom 55 percent reported that their work and field of study were closely related while 20 percent indicated a mismatch (Robst 2007).

Because they did not prioritize their personal interests when selecting majors, it was not surprising that even some of those who started in jobs that fit their majors often changed to jobs that fit their majors less to pursue jobs that better fit their personal interests. For instance, Zhen Cao, a female regular bachelor’s graduate, said she had chosen her major in Chinese language and literature in a “random and confused” (xīli hustu) way, mainly because she thought “it could lead to jobs doing stuff in civil service and administration and that would be pretty good for a young girl,” and because her athletic accomplishments were not outstanding enough to qualify her for a sports major in a top-tier bachelor’s degree program, which she would have preferred because of her interest in sports. As soon as she graduated from college, she started working as a teacher of Chinese language and literature in a private school and worked there for 2 years. However, the school had
trouble attracting enough students and shut down 2 years after she started her job there. Zhen Cao did not try to get another job as a Chinese language and literature teacher, as she did not particularly like her first job: “Being a teacher was really time-consuming, energy-consuming and also stressful. . . . Teachers, unlike other usual workers, cannot rest during weekends. So it was not a very good job.” Instead, she started working part-time as a model and opened her own bridal shop a year after she lost her teaching job. As she explained:

I later became a model . . . actually up through the present I have been modeling. This job was an accidental one. I once helped my friends taking photos by showing them how to pose in a photographic studio and then because my photo was good and many of my friends had connections in different photographic studios, I continued to do this job. Later on, I started my own business—a wedding gown store. It might be because I had the experience of being a model and always took photos of dressing in a wedding gown … I opened up my own wedding gown store and I liked it.

Similarly, Wang Yu liked cars as a teenager, and therefore wanted to major in driving or car repair in vocational high school. His parents, however, feared that driving and car repair were too dangerous, and therefore persuaded him to major in culinary arts instead. Wang Yu interned as a cook after graduating from vocational high school, but did not like his internships. Wang Yu said that, while he liked using the skills he learned to make dishes that his parents enjoyed, he disliked the “tiring and demanding” nature of working in kitchens: “After all, I had to stay close to stoves every day,” he said. “It was extremely hot, especially in summer, since we were dealing with fire. In addition, the kitchen’s floor was always wet and slippery, so sometimes I tripped carelessly.” Wang Yu interned at a few places as a cook but in the end switched jobs to work as a vehicle fitter—a job unrelated to his vocational high school training, but “was kind of relevant to cars,” which he had been personally interested in since he was a teenager.

Gambling on the Future: Choosing Majors to Adapt to the Future Job Market

China’s fast growing economy created new opportunities but also made it difficult for our interviewees to make any informed decisions, because changing circumstances often reversed the profitability of their choices. Even majors that seemed likely to lead to lucrative careers, such as those related to finance, accounting, foreign languages, and technology, entailed risks as they could quickly become oversaturated, and fields with favorable ratios of job opportunities to job seekers during a particular year could become obsolete or oversaturated a few years later. Several of our interviewees chose majors in fields they thought would lead to more and better job opportunities, only to find upon entering the job market that those fields had become obsolete or
oversaturated, or had not expanded as rapidly as interviewees had predicted. Many students tried to predict the demands of the market in the near future so that they would be more marketable as the first graduates to possess rare skills that would be in high demand by the time they graduated.

Basing major choice on predictions of future opportunities could even backfire, as Zhang Min’s case illustrated. Zhang Min attended a college-prep high school but did not score high enough to get into a regular bachelor’s or associate degree program, so she majored in computer science in an adult education associate degree program because she thought that computer science was likely to offer many job opportunities. However, she had trouble finding a suitable job after getting that degree. She spent half a year searching for a white-collar job before she lowered her standards and found a job as a salesperson at a mall, which she could have gotten even without a college degree, and offered a salary and prospects for promotion that she considered too low. Hoping to improve her prospects, she then enrolled in an adult education bachelor’s degree program in logistics management. “At the time I studied it, this major was a new major,” she said. “It seemed that when I graduated there was no company that officially recruited students in this major because there was no ‘logistics management department’ in any company. I was in the first group who studied this major, because its future development was kind of promising.” After getting this degree, she could not find any job related to logistics management but did manage to move to a job in customer support, at a company with “promising development” and a “good overall operation and environment.” This job was only available to bachelor’s degree holders but still had nothing to do with either her associate degree major in computer science or her bachelor’s degree major in logistics management. While working at this job, she took a nondegree private class in finance, and then moved to another job in finance with the help of a friend who vouched for her abilities, even though that job was normally reserved for those with bachelor’s degrees in finance. When asked what she would do differently if she could choose her educational path again, she said she would have chosen a finance major when she first started college, since finance was “too hot” by the time she took the nondegree class in finance and got her first finance job, whereas if she had majored in finance instead of computer science and logistics management in college, she might have been able to get a better job in finance, back when the field was not yet oversaturated with finance degree holders. “Also, I did not learn [my majors] very well, especially computer science,” she said. “If I could study computer science well, this major would be good for me. Logistics management was not a popular one at the time I chose it, and when I graduated it was indeed still unpopular [as a field without many jobs]; since at that time the [2008] financial crisis happened, logistic management ceased to develop. Nowadays the development of logistic management in China is not good.” Thus in spite of her pursuit of majors with a
promising potential for job openings, her predictions failed to come true, and she had to pursue a different path toward finance once she started working—one that she also found was too “hot,” and thus oversaturated by the time she started pursuing it.

Discussion and Conclusion

Our interviewees grew up as part of the singleton generation, which experienced heavy parental investment, high aspirations and educational attainment, intense competition, and diploma inflation because almost every child was the only hope of his or her family (Fong 2004). This hypercompetitive environment caused students to value credentials over personal interest in a major. Like previous studies of twenty-first-century Chinese youth (Woronov 2011), our study found that our interviewees were faced with an educational system in which a bad score on their high school or college entrance exam could ruin their life chances and deny them opportunities for upward mobility. Many interviewees found their educational training in vocational high schools and adult education to be of low quality, corroborating other studies that documented the poor quality of many vocational high schools in China (Li 2002; Cooke 2005; Woronov 2011). Many who wanted jobs matching their majors were unable to get such jobs, and even some of those who got jobs matching their majors left those jobs to pursue jobs that better suited their personal interests.

The realities of a job market in which desirable jobs were scarce, but competition for them fierce, made personal preferences for particular majors a low priority for our research participants, in contrast with participants in US studies who considered the fit between their personal interests and their majors a top priority. The choices made by youth in our study were chiefly governed by an economic rationale. Our interviewees’ decision-making processes resembled those of individuals from disadvantaged social backgrounds in the United States, who were found to use education as a means for economic mobility while those from more advantaged social backgrounds for whom college was the norm were less “purposively driven by an economic rationale” (Brand and Xie 2010, 293). As a result, many of our research participants pursued a strategy in which jobs were selected based not on a coherent vision of a career trajectory making use of the skills and knowledge they received in their majors, but rather a series of opportunities and misfortunes. This often resulted in aggravating the major-job mismatch as respondents progressed in their career trajectories.

The heavy parental investment, high aspirations and educational attainment, diploma inflation, and fierce competition for white-collar jobs their generation experienced caused our research participants to prioritize

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4 See, e.g., Adams et al. (1994); Larson et al. (2002); Malgwi et al. (2005); Beggs et al. (2008).
credentialism, which emphasized the importance of maximizing educational attainment but did not emphasize the importance of finding majors or careers that fit a student’s personal interests. Few of our interviewees received vocational guidance that informed them of the career options they had and helped them navigate the school-to-work transition, and almost none received vocational guidance that emphasized matching majors and jobs to their personal interests. Our interviewees’ parents socialized their children to do whatever they could to get the most prestigious credentials they could get, but did not encourage them to choose particular majors or careers, in sharp contrast with better educated Asian American parents in studies conducted in the United States (Kim 1993; Tang et al. 1999; Xie and Goyette 2003), who pushed their children into specific careers that would enable them to attain upward mobility. Another study conducted on the larger sample from which our interviewees were drawn explains how these parents “talked reason” (jiang daoli) with their children, which consisted of convincing their children of the importance of studying in order to find good jobs in the future (Kim and Fong 2013). Discussions of the types of majors and careers children should pursue were mostly absent from this discourse, which may have been due to most interviewees’ parents’ poorly educated, working-class backgrounds, which made them unfamiliar with the many rapidly changing and newly emerging academic and professional fields that would be available to their upwardly mobile children.

Further exacerbating the major-job mismatch was the unpredictability of the job market as it transformed in accordance with rapid changes in the Chinese economy, which made it difficult to predict how marketable majors would be in the job market just a few years later. As a result, choosing majors seemed like a shot in the dark that could not result in predictable consequences, making careful selection of major a useless endeavor and undermining students’ ability to find jobs matching their majors upon graduation. The growing economy in China created many new opportunities for youth, which led some students to pick majors solely based on their promising potential. However, their predictions were sometimes inaccurate, when it turned out that what they thought would be a “hot” major did not turn out to be as hot as expected, as in the experiences described by Zhang Min. This often resulted in a mismatch between major and job, when our interviewees chose majors that turned out to be obsolete or oversaturated in the job market by the time they had graduated.

Our study shows that, in spite of the discourses about agency and freedom of choice permeating the current labor market in China, the institutions and systems involved in the processes of major and career decisions did not leave much room for choice. This was especially true for students who were not able to enter into a regular bachelor’s degree program, whose choices were constrained by their lower-prestige credentials. Youth were not socialized to
consider their personal interests when thinking about career choices and often had a utilitarian view of education and work. Though they often disregarded their personal interests and chose majors they believed would lead to desirable jobs, it was common for their major choices to later become irrelevant due to the unpredictability of the rapidly changing economy in China, which made it difficult to predict which majors would become obsolete or oversaturated by the time they entered the job market. Nor were they strongly committed to staying in the field in which they majored, since they often had little interest in that field to begin with. The personality attributes that are emphasized in the US-based literature on choices of major were minimally important in the decision processes of our Chinese youth interviewees, who were exposed to a Chinese education system and job market in which the need to maximize every possible advantage in the school admissions and job-seeking process often outweighed their desire for majors that fit their personalities. Despite their intense focus on strategically choosing majors that might lead to more and better job opportunities, many of them still learned upon entering the job market that even these strategies did not produce the results they hoped for, as rapid changes in the structure of the job market often canceled out their careful planning.

The major-job mismatches found in this study signal a potential problem for the future as China’s fast developing economy increasingly demands skilled talent. Our study suggests that Chinese students need better counseling about what different majors entail and what career prospects they could lead to, but also that they should be encouraged to base their major choices at least partly on their personal interests, rather than focusing exclusively on how marketable they predict their majors will be, since the sacrifice of their personal interests has a high likelihood of being unnecessary and futile, given how likely they are to get jobs unrelated to their majors. Policy makers and school administrators who determine the names and contents of majors in Chinese schools would also be well advised to focus more on ensuring that students in all majors learn skills that will be applicable to a wide variety of fields, and less on the development of hyperspecialized majors that prepare students only for very specific jobs, since most youth are not going to get jobs that match their majors and will therefore need skills that can be used for many kinds of jobs beyond those that match their majors.

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