


Cope and Grow: A Grounded Theory Approach to Early College Entrants' Lived Experiences and Changes in a STEM Program

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Abstract

In this grounded theory qualitative study, we interviewed 34 graduates from one cohort of 51 students from a prestigious early college entrance program in China. Based on the interview data, we identified distinct convergent and divergent patterns of lived experiences and changes. We found several dominant themes, including peers' mutual stimulation for excellence, academic competition, big-fish-little-pond effect, coping with academic challenges, transition to college life, developing intrinsic interests, and making critical career decisions. Based on the thematic analysis, we developed a Cope-and-Grow model of strivings for academic excellence while developing one's self-identity. Three interrelated claims are made about the unique situation in which early college entrants found themselves, individual differences in coping and growing experiences, and intrapersonal changes over time. Rich connections are made between the Cope-and-Grow model and the extant empirical research and theories, such as aptitude theory, developmental asynchrony theory, and talent development theory. We also discussed the implications of the findings for curricular and instructional adaptation, counseling interventions, and future research.

Keywords

qualitative methodologies, social and/or emotional development and adjustment, student motivation

Introduction

Early college entrance is one of the most commonly implemented acceleration forms identified in *A Nation Deceived: How Schools Hold Back America's Brightest Students* (Colangelo, Assouline, & Gross, 2004a, 2004b). Collectively, empirical research on its academic influence has painted a fairly positive picture. Much research has found that early college entrants enjoyed great academic successes. For example, they made good academic progress, attained similar or even higher grade point averages than their peers, completed more honors courses than regular students (Brody & Stanley, 1991; Janos & Robinson, 1985; Janos, Robinson, & Lunneborg, 1989; Muratori, Colangelo, & Assouline, 2003; Noble & Robinson, 1993; Olszewski-Kubilius, 1995; Saylor, 1994), graduated sooner, earned more honors (Brody, Assouline, & Stanley, 1990), and were more likely to earn advanced degrees and enter higher status careers after graduation (Stanley, 1985). Research also shows that some early college entrants “underachieved” (Janos, Sanfilippo, & Robinson, 1986) and they had coping problems associated with low grades (Gregory & Stevens-Long, 1986). There also have been incidences of academic probation (Muratori et al., 2003).

In terms of social–emotional aspects, much research shows that early college entrants are able to adjust to an accelerated setting and navigate their way through college successfully. For example, most early entrants enjoyed friendship and social activities and participated in extracurricular events and organizations (Saylor, 1994). Their self-concept, perceptions of parent and peer relationships, self-acceptance, and sense of responsibility were no different from their equally able age peers (Janos et al., 1989); and their self-esteem changed little after entering colleges (Lupkowski, Whitmore, & Ramsay, 1992). They also reported higher levels of satisfaction in their achievements, standard of living, and future security than their age peers (Boazman & Saylor, 2011). Despite these benefits, findings regarding the negative social–emotional impact of early college entrance also indicate that some early college

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entrants felt distressed by the academic demands of fast-paced college study (Gregory & Stevens-Long, 1986). Underachieving males tended to be psychologically immature, more likely to have internal conflict than their high-achieving counterparts (Janos et al., 1989). In some cases, early college entrants were found to experience depression and other adjustment problems, and even drop out of the program (Cornell, Callahan, & Loyd, 1991a, 1991b). Taken together, however, the past research generally suggests that early college entrants achieve great academic success with minimal instances of social or emotional difficulty.

Previous research on acceleration has typically been done with a focus on overall outcomes as evidence for effectiveness of particular forms of acceleration (e.g., Brody, Muratori, & Stanley, 2004; Steenbergen-Hu & Moon, 2011) rather than on real-time contextual events, psychosocial effects, and developmental changes and transitions, with few exceptions (e.g., Muratori et al., 2006). There is a lack of systematic inquiry into acceleration from a developmental perspective. Robinson, Shore, and Enersen (2007) identified the lack of solid evidence on social and emotional development of accelerants as an issue to be addressed in research. In this study, we addressed these shortcomings in research on acceleration, particularly early college entrance programs. We also built on the positive and negative academic and social-emotional effects of such programs found in the literature by tracing early college entrants' academic and social-emotional experiences and developmental changes. This way, the results may be interpreted in light of the previous research to strengthen their generalizability.

To make connections with the current theoretical work, we use three theoretical frameworks and related research to guide this study. The first one is the aptitude theory (Snow, 1992; see also Ackerman, 2003; Cronbach, 2002; Lohman, 2005). We assumed that accelerated students differ in their aptitudes for dealing with academic and/or social challenges over time. The second framework is the developmental asynchrony theory, which sees gifted development as characterized by an asynchrony of advanced intellectual development and relatively lagging-behind social and emotional development (Morelock, 1996). We surmised that early college entrants might be able to handle difficult academic challenges, but may have difficulty making life decisions and dealing with academic or social stressors and emotional problems. The third theoretical framework is talent development theory (Bloom, 1985; Csikszentmihalyi, Rathunde, & Whalen, 1993; Dai & Renzulli, 2008; Simonton, 2005). We want to know how early college entrants make their academic and career decisions, and what curricular and instructional events and circumstances prompt "crystallizing experiences" and personal commitment to a particular line of talent development (Walters & Gardner, 1986, p. 306). Although using these theories as a heuristic guide, the grounded theory approach dictates that we develop inductively a theoretical framework that can maximally explain the data (Creswell, 1998).

Purpose of the Study

The purpose of this study was to understand how early college entrants responded to the academic, social, and developmental opportunities and challenges, and what the short- and long-term consequences of their acceleration experiences were over the course of the 4-year academic program. Three basic, open-ended questions served to organize this study: (a) How did early entrants respond to academic challenges and educational opportunities during the course of their college years? What were the related issues and consequences? (b) How did early entrants interact with their peers and social environments? What were the related issues and consequences? Finally, (c) How did early entrants make transitions from secondary school to college? What were the related issues and consequences?

Method

A semistructured interview protocol of nondirective questions was modeled after Hertzog (2003). It covered the following five dimensions: (a) experience, (b) selection/placement, (c) curriculum/instruction, (d) social/emotional, and (e) retrospective insights (see Appendix A for the complete interview protocol). The study was phenomenological in the sense that *lived experiences* of the early entrants provided the basic evidence of what transpired in such a special program. However, the grounded theory approach, as a main analytic tool for this study, went beyond interpretations of subjective experiences and perceptions, viewing them as symptomatic of deeper behavioral and psychological regularities.

Participants

The participants of this study had been early entrants of the Special Class for the Gifted Young (SCGY), a residential early college entrance program in China. The SCGY was launched in March 1978 by the University of Science and Technology of China after the end of the cultural revolution. It was a result of the Chinese government's initiatives to reform and reinvigorate China through advances in science and technology. The motivation was to create a pipeline of scientific talents as quickly as possible in order to boost the economic development of the country (Liu & Zhang, 2011). The SCGY has been one of the most prestigious math and science undergraduate programs in China. Many of its graduates now hold important positions in prestigious academic institutions and financial and high-tech companies.

The SCGY annually admits a highly selective group of students of 14 to 16 years of age, who have demonstrated exceptional academic abilities, particularly in math and science. A main screen device for admission is the National College entrance exams; applicants need to score at the top 3% in order to be considered. Candidates selected based on the exams, are invited to spend 1 week on the University of

Science and Technology of China campus where students are taught lessons and then tested for their understanding. In addition, candidates also go through interviews and psychological testing. Each year, the SCGY admits approximately 30 to 50 students from 2,000 to 3,000 applicants nationwide.

We interviewed 34 early entrants (25 males and 9 females) from one cohort who enrolled in the SCGY in 2000 and graduated in 2004. The interviews were conducted between 2008 and 2009, roughly 4 to 5 years after they graduated from the SCGY. The sample represented about 67% of the cohort of 51 students. For the nonparticipants, either no contact information was available at the time or it was practically difficult to arrange interviews. The ages when the interviewees entered the SCGY program ranged from 14 years and 4 months to 15 years and 11 months with a mean of 15.2 years. The majority of the participants were from several provinces adjacent to the SCGY. They were selected from a total of 1,211 applicants that year. They were the top 1% to 3% students of respective high schools. Noteworthy is the fact that eight students were from one preparatory school (i.e., Suzhou Secondary School), which, starting in middle school, selects and prepares potential candidates for the SCGY, and ensures their smooth transition into their college careers. In this preparatory school, all students are expected to finish high school in 2 years instead of 3 years.

The second author of this study was the class supervisor for this cohort from the time when they entered the SCGY in 2000 until they graduated in 2004. She interacted with these students on a daily basis for 4 years. She was responsible for monitoring students' academic progress and behavioral problems, intervening as necessary, communicating with parents, providing guidance on study, time management, and social skills, providing help for students with social or emotional challenges, conducting semester and yearly student evaluation; and selecting candidates for awards, fellowships, and financial assistance. Therefore, she has extensive knowledge of these interviewees and their family backgrounds.

Procedures

Because the SCGY graduates were residing all over the world, we offered the choices of interviewing either through phone calls or online instant text message. Of the 34 interviews, 31 were conducted through phone calls and three interviews were conducted through online instant text messages. The phone interviews were audiotaped. All the phone interviews were conducted in Chinese and transcribed afterwards. For the interviews through online instant text messages, one of them was conducted in English because the interviewee was studying in the United States and he preferred writing in English and two were conducted in Chinese. The three text interviews each generated about five pages of the transcript and each interview lasted for about 40 minutes. The phone interviews ranged from 28 to 88 minutes in length,

with an average of 44.18 minutes. All interviews were transcribed and imported into NVivo for processing. All the quotes in this article were translated from Chinese into English by the first author and checked by the other two for accuracy.

Data Analysis

We utilized a three-step approach suggested by Strauss and Corbin (1990) to analyze the data. In keeping with the grounded theory approach, the overall strategy was to take a bottom-up approach, segmenting interview data to low-inference codes and then developing a more conceptual structure to organize and integrate these codes. The three authors were involved in data coding efforts for a 2-year period and an additional research assistant joined the efforts in the final phase of coding. Using a consensual qualitative approach, we coded the data independently and then revised the coding collectively through mutual checking and regular memoing about the initial takes and revisions (Hill, Thompson, & Williams, 1997). The essence of this method is to make the coding an iterative process so that progressive deepening of insights and understandings can be achieved by going back and forth between data and interpretation.

Open Coding. Strauss and Corbin (1990) described open coding as that which “fractures the data and allows one to identify some categories, their properties and dimensional locations” (p. 97). We generated open codes by segmenting each interview into discernable, indivisible units of meaningful expressions, ranging from one to five sentences. Each unit constituted a reference, which was given a label (i.e., a code). Open codes were generated in a bottom-up fashion. They were low inference codes in the sense that they were descriptive of what was said in the interview, with minimal inference made (e.g., “continued the study habits developed in high school,” “decreased self-concept”). Coding was done in an iterative fashion until the data was “saturated”; meaning, no more meaningful codes could be extracted. Open coding generated 120 open codes and 1,193 references (i.e., total instances of the 120 codes) with the number of references per code ranging from 1 to 27 (mean = 9.9). An average of 32 references was extracted per interview. The 21 most referenced open codes can be found in Appendix B.

Axial Coding. The open coding was followed by axial coding, making connections between “a category and its subcategories” so that the events, ideas, feelings, and other phenomena represented by open codes could be organized in a connective and coherent web (Strauss & Corbin, 1990, p. 97). We first organized open codes into a few higher order dimensions. To enhance the representativeness of the codes, only codes with five or more references (i.e., instances) were included, resulting in 78 qualified codes. We were able to group 69 open codes into 12 higher order categories (see

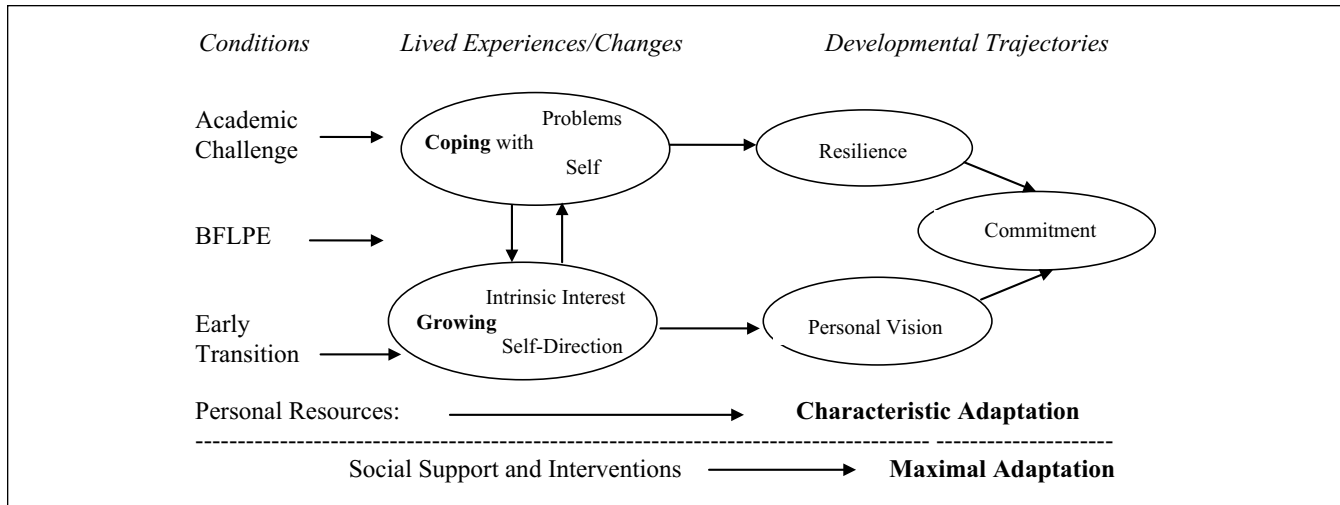


Figure 1. A Cope-and-Grow model of strivings for academic excellence while developing one's identity.
 Note. BFLPE = big-fish-little-pond effect.

Appendix B), which were subsumed by three interrelated dimensions: academic, social, and developmental. There were nine remaining open codes, as they fit into none of the higher order categories.

Selective Coding. The purpose of selective coding was to develop a clear analytic story that integrated all important aspects of axial coding (Strauss & Corbin, 1990). In the process of identifying major categories and dominant themes, it became clear that for the same category, there were divergent experiences (e.g., positive and negative reactions to highly competent peers). A total of 14 open codes were selected for identifying divergent patterns of responses on the four categories (see Appendix B). These four categories were (a) positive versus negative experiences with the curriculum, (b) active versus passive academic coping, (c) positive and negative big-fish-little-pond effect (BFLPE; Marsh & Hau, 2003), and (d) intrinsic motivation to learn versus lack of motivation. Each participant was rated "+1," "-1," or "0" (neutral), accordingly. The ratings of the above four categories were further combined to form two main dimensions: *Academic Coping* (AC) and *Academic Growing* (AG). For those participants whose responses to each dimension were not clear, the original verbal protocols were revisited, and their ratings on each dimension were determined. The interrater agreement was 88%. A total of 18 interrater discrepancies in ratings were resolved in a consensual process.

Theoretical Sampling. To take a more in-depth look at how individual students interacted with the impinging academic and social environments, we conducted a theoretical sampling (Creswell, 1998) by identifying five early entrants who were representative of the divergent experiences identified based on AC and AG. The purpose was to build a rich description of individual histories that weave together both endogenous and exogenous factors, thus adding to the depth

and details of the theoretical model we tried to develop. In the analytic story, these five individuals (Jiang, Kai, May, Ron, and Yilong)¹ will be referred to extensively.

Results

Various lived experiences of the early college entrants can be subsumed by two distinct categories: Cope and Grow. Coping is defined as dealing with taxing situations that seem to exceed one's personal resources (Boekaerts, 1993). Coping can be *active*, such as making an effort to solve problems, or *passive*, such as disengaging from the source of stresses and problems. It can be *enactive*, focusing on solving problems of the academic, social, or developmental nature, or *reflective*, dealing with negative emotions and self-affect engendered by taxing conditions. Growing is defined as a process whereby one gains personal strengths and resources. It also has its enactive and reflective aspects. Growing can be enactive in the sense of directing energy toward the outside world (e.g., developing intrinsic interests and life passions through transactions with a particular environment). It can be reflective, directed inward, for instance, searching for a better understanding of self. Cope and Grow are flip sides of the same coin of responding to environmental opportunities and challenges, depending on how individuals construe their experiences. The functions of Cope and Grow are different: to cope is to maintain oneself and preserve personal resources and self-respect, whereas to grow is to expand and change oneself (Boekaerts, 1993; Labouvie-Vief & Gonzalez, 2004). Both serve important adaptive purposes in the face of new opportunities and challenges. However, active coping can turn into growing when the end result is gaining personal strengths (e.g., overcoming fear), and passive coping can become "maladaptive" (e.g., developing a phobia).

As shown in Figure 1, Cope and Grow are psychosocial events situated in specific academic, social, and developmental

conditions created by early college entrance. Three intertwined conditions are specified: academic challenge, BFLPE, and early transition to college. Students' lived experiences of Cope and Grow, in turn, have temporal trajectories and developmental consequences in terms of resilience (Cope) and personal vision (Grow), eventually leading to a commitment to a particular life path. Furthermore, Cope and Grow have a dynamic, reciprocal relationship, indicated by bidirectional arrows, in the sense that coping can turn into growing (Cope to Grow) and growth can enhance coping (Grow to Cope).

Based on this conceptualization of the data structure, we develop a grounded theory that consists of three interrelated claims, each of which will be explicated with supporting evidence.

Claim 1: Early College Entrance Accentuates and Amplifies Both Coping and Growing Experiences

In the Cope-and-Grow model (Figure 1), there are three main conditions engendered by early college entrance: academic challenge, BFLPE, and early transition to college. The three conditions constitute what we might call a social ecology in which the early entrants found themselves. Although cope and grow can be considered ubiquitous for adolescents, early college entrance accentuates and amplifies both coping and growing experiences.

Academic Challenge: Inspiring and Shocking

Academic life was challenging, particularly in the freshmen year. Although the SCGY students did not declare their majors until the end of the first year, mathematics and physics were featured prominently in the first-year curriculum as foundational. Ten interviewees mentioned that the curriculum was tough. One interviewee characterized the contents as "highly advanced, which was also taught in a highly theoretical manner" (Case 31, April 9, 2009). The new academic challenges evoked both growing and coping experiences; some responded more positively and others more negatively. Fourteen interviewees considered the curriculum challenging but appropriate, allowing for sufficient choice, whereas other 13 interviewees considered the curriculum either too tough or too redundant. Seven interviewees, without prompts, mentioned Professor Wong's Advanced Mathematics class as one of the most distinct memories of the freshmen year. Professor Wong's style of lecturing was unconventional, it was not as much coverage of textbook knowledge as pondering mathematical problems. It represented a level of mathematical thinking that many of the early entrants found difficult to follow: "the way he taught was so arbitrary that I completely lost confidence that I could keep up. [it] may be good for graduate students?" (Case 31). But for others, his teaching was inspiring. "His teaching suited me well . . . I

don't like following the textbook step by step; I like to learn with a targeted problem" (Case 19, March 16, 2009). "Professor Wong can be seen as enlightening our minds. He is brilliant . . . I found this kind of teachers more helpful for SCGY; they show more personality; they teach you ways of thinking about certain problems, not just teach you some knowledge" (Case 18, March 15, 2009).

Like Professor Wong's course, many courses engendered coping experiences (stressful and frustrating) for some, and growing experiences (inspiring and enlightening) for others. On the one hand, intellectual curiosity and academic interests were aroused by courses taught by inspiring professors (i.e., Grow). On the other hand, setbacks also took a toll on students' self-efficacy and self-concept (i.e., Cope). For many students, the fact that half of Professor Wong's class failed the midterm exam was nothing short of a rude awakening, leading to self-doubts that had never occurred until this moment. These early college entrants were used to having smooth sailing in secondary school. Fifteen interviewees mentioned that they were top students in their respective high schools. Many were perceived as child prodigies. Reassessment of one's own competence in the face of new challenges naturally followed.

Big-Fish-Little-Pond Effect (BFLPE): Threatening, Affirming, and Instigating

The BFLPE refers to the phenomenon that comparably able students will have higher or lower academic self-concept, depending on whether their peer groups are comparatively stronger or weaker (Marsh & Hau, 2003). In other words, given the same level of performance, weaker peer groups as a frame of reference would lead to more favorable self-perceptions, and stronger peer groups would lead to lowered self-perceptions or self-concepts. High selectivity of the SCGY should make BFLPE more distinct, as the transition to college for the early entrants meant big fish moving from small ponds to a big one, only to realize that there are even bigger fish out there (Dai & Rinn, 2008). Some interviewees ($n = 10$) felt that the academic competition was quite "fierce." "You were in the midst of many powerful minds; the pressure to keep up was quite high. Some of the students had a tendency to escape from the competition" (Case 29, April 6, 2009).

Yilong, who experienced euphoria at the news of being admitted to the SCGY, had a reality check before long: "Gradually I felt I was among those below average. . . . And then you came to have a better understanding of yourself; for example, mathematically you can never catch up with Wei [a classmate] for your entire life" (Case 17, March 13, 2009). Ron was another who was negatively affected. He remembered vividly what happened 8 years ago in Professor Wong's class: "I got 58 [on the midterm], the first time I flunked a test . . . There were four students getting the full score!"

(Case 13, March 7, 2009). One third of the interviewees ($n = 12$) reported a somewhat negative BFLPE on their self-concept and self-efficacy.

However, it was not always a negative experience to be “in a big pond.” 17 interviewees reported a more or less positive impact of having equally strong or stronger peers. Some students felt that it was helpful to have the experience of “big fish turned small” in a big pond: “We suddenly realized there are mountains over mountains, skies over skies. This was good for keeping things in perspective, and good to have a sense of peaceful humility” (Case 12, March 4, 2009). Others simply had a growth mindset and saw the BFLPE differently (Dweck, 2006). “In this group [SCGY] everyone strived to better themselves. This was very helpful for your growth. . . . Everyone was making strides. When I wanted to relax, simply seeing others working hard instigated me” (Case 15, March 8, 2009). In effect, BFLPE was a distinct negative experience for only one third of the interviewees; two thirds of the interviewees ($n = 22$) identified mutual stimulation and motivation as a main peer group dynamic. May was one of them.

May was pursuing her doctoral degree in physics at an Ivy-League University when she was interviewed. She said that she relished every moment of that 4 years she spent in the SCGY class, because it provided a “relatively pure learning environment” (Case 21, March 21, 2009). She had a very positive view of the big-fish-little-pond situation:

Because you were surrounded by a group of extraordinary people. Someone like Chan is a genius. When you were with him, you would naturally feel you have something to improve upon; if you were number 1, no one could catch you, and you would get relaxed. . . . Having peers as smart as or smarter than you makes you work harder every day.

Early Transition to College Life: Continuity and Discontinuity

The new SCGY students were experiencing an important transition; they entered college 3 years earlier on average than their age peers. Nine interviewees mentioned that it was hard to adjust to the new way of life on a college campus. One interviewee remembered that he failed to keep track of his schedule and missed a final exam in the first year (Case 3). But 20 mentioned that they had more freedom and flexibility. “You can do whatever you want. The university gives you a more liberal education” (Case 18, March 15, 2009). Continuity and discontinuity were felt by many, as more than half interviewees ($n = 18$) mentioned they retained the momentum they built up in high school: “we still felt the same kind of energy and motivation for study as we had in high school. We listened to lectures very closely, and we worked very hard to complete the mounting assignments” (Case 23, March 25, 2009). However, some of them started to feel the downsides of following the old habits: “[we were] too test-centered; we wouldn’t study things that had nothing to do with exams” (Case 15, March 8, 2009). “Moving

abruptly from the high-pressure high school to college where you were on your own, I got a bit sloppy with my academic work, to the point of always cramming right before exams” (Case 22, March 25, 2009). The transition to college meant a switch from the old habit of learning as absorbing a large body of knowledge, which was a quite dominant mode of learning in secondary schools in China, to a new habit of seeking a deep understanding of a discipline as a way of feeling, thinking, and talking about a targeted set of phenomena. It was not easy for the early entrants.

Discontinuities in the transition were also felt at the social level. Although some students continued to have strong family support, many felt that their parents were either too remote to help because of physical distances or put unduly high expectations on them to perform in college. For example, Kai came from a well-off family and his mother was behind him all the time. In contrast, Jiang came from a rural, economically less developed area. His father, a middle school principal, was delighted about the fact that his son was accepted to the SCGY class, and held high hopes about his son’s future. As can be seen later, growing experiences were never disrupted in the transition for Kai; however, for Jiang, the transition became a distinct coping experience, because of the conflict between his newly gained freedom and his demanding father.

Cope and Grow With Academic and Career Choice: The State of Mimang

The effects of early transition to college would not unfold until the end of the freshmen year when all the early entrants were expected to select their majors, and then around the end of the junior year, when they were expected to select their lab apprenticeship, with the graduation in sight. *Mimang* (迷茫) or *Miwang* (迷惘), meaning “confused, lost in direction,” was the term used by a majority of the interviewees ($n = 20$) to describe their experiences when important decisions had to be made. *Mimang* occurred when many early entrants had to select their majors, but were not sure what they wanted. When they got to the junior year, many were “following the crowd in taking T[OEFL] and G[RE] in a state of confusion, not knowing why [they were doing that]” (Case 25, March 27, 2009). *Mimang* was a moment of coping with the lack of direction and the difficulty making critical decisions of the kind they had never faced or had never had to make before, another discontinuity between high school and college life, exacerbated by early college entrance. However, *Mimang* was also a moment of personal awakening, a moment of coming of age. It was a cry for self-direction and inner voice. It was a moment of growth par excellence.

Claim 2: Divergent Experiences Lead to Four Distinct Cope-and-Grow Patterns

Individuals differ in personal and social resources with respect to coping and growing. For some early entrants,

Table 1. Four Patterns of Cope and Grow Based on Positive and Negative “Academic Coping” and “Academic Growing.”

	The well adjusted	Those in limbo	The unruly ones	Those who drifted away
Academic coping (AC)	+	+	—	— or 0
Academic growing (AG)	+	— or 0	+	—

Note. + = presence; — = absence; 0 = undetermined.

growing experiences were predominant and coping is secondary. For others, coping efforts were more salient in their lived experiences. These differences led to different patterns of psychological and behavioral changes, or “characteristic adaptations,” which are nonrandom, structural regularities involved in person–situation interaction (see Figure 1; McAdams & Pals, 2006, p. 208). Divergent cope-and-grow experiences have distinct developmental trajectories and consequences in terms of study strategies and academic and career choice. Two distinct constructs were created based on 13 open codes that show divergence: AC and AG. AC was indicated by meaningful efforts to keep up the hard work to meet the academic challenges, leading to Resilience. The opposite was the lack of active AC or demonstration of passive coping behaviors, such as cramming for exams, copying classmates’ work, and simply seeking a haven in sports or video games. AG was indicated by the presence of intrinsic academic interests, deep engagement in learning, and persistent hard work, leading to Personal Vision (see Figure 1). Based on these two dimensions, four patterns of cope and grow can be identified with respect to academic strivings (see Table 1).

Staying on Top of the Game: The “Well Adjusted”

Nine early entrants were identified as showing positive AC and positive AG. Although a couple of them made minor complaints about the curriculum, this group found a way to make the program work to their advantage. Regarding BFLPE, they made the highly competitive peer environment motivating rather than discouraging. They actively coped with the academic challenges and showed a distinct disposition for self-directed learning and interest-based motivation. Compared with other groups, these students were more focused on what they themselves were doing, rather than how well others were doing.

Kai was a distinct example of positive AC and AG. Like many others, Kai also complained about too many courses and “no breathing room” in between. Otherwise, Kai did not see much difference between the regular college and the SCGY program, but “[y]ou just had to be tougher,” Kai said. He had his own weak spot: his perfectionism. “I used to be so nervous on every detail . . . later I just stopped worrying, and [instead tried to] grasp important points,” Kai said (Case 1, November 23, 2008). May was another case of the “well adjusted.” She had different issues to wrestle with. She

experienced setbacks in mathematics while in high school, but rediscovered her strength in math at the SCGY. “I got straight A+s in math, thanks to Professor Lee, who rekindled my passion for math” (Case 21, March 21, 2009).

The “well adjusted” students also tended to come from families that provided strong social support. Eight mentioned parental support or good relationships with their parents. Although we do not know the extent to which their home environments might have shaped the way they were, both May and Kai were quite determined and highly motivated. When applying for the SCGY, “I knew exactly what I was looking for,” Kai reminisced with a distinct resolve (Case 1, November 23, 2008). “I am competitive and focused in nature,” May said (Case 21, March 21, 2009). Hard work was a norm for this group of students who were attempting to keep up and get ahead in the game.

Staying in the Game: Those “in Limbo”

About 12 students fit into this group, marked by a unique pattern of positive AC, and no apparent evidence of positive AG. They kept up with curricular challenges reasonably well, but many of them experienced self-doubts regarding their choice of majors and academic standing.

Ron did not do well in the first year. Although he was trying hard to catch up in the second year, he felt that he had never got into his comfort zone: “a feeling that you just get it, that you fully understand what the professor is talking about” (Case 33, April 12, 2009). Students “in limbo” were trying very hard and managed to achieve an average or above average academic standing, but were not as successful as the “well adjusted” group. Their efforts to stay in the game (e.g., keep up with the pace of the curriculum and more advanced peers) took a toll on their self-concept and self-esteem. One female student reminisced that “I had been thinking about this for 2 years, and it was hard—low self-esteem.” (Case 31, April 9, 2009). It caused academic procrastination: “There was a period of ‘Mimang,’ feeling that many classmates were so excellent that I did not know what would work for me.” (Case 2, November 24, 2009).

Mimang was quite a prevalent experience in this group (those “in limbo”) compared with other two groups on both ends (the “well adjusted” group or the “lost” group), because given the opportunities and options available, the calculus of outcome expectancies and values was more complex (Eccles et al., 1983). That is, while the extreme groups are mentally “settled,” the middle group experienced more uncertainties

about how likely they would succeed with a particular choice. With respect to cope and grow, it seems that when one is struggling (i.e., in a predominant coping mode), as many of those “in limbo” were, AG is halted to some extent, as most personal attention and resources seem to be channeled exclusively to dealing with tough situations at the moment (Boekaerts, 1993).

Playing the Game by One’s Own Rules: The “Unruly” Ones

Only four early entrants (all males) showed a unique pattern of the lack of active AC and but some evidence of AG. Compared with the “in limbo” group, they showed clear evidence of intrinsic academic motivation, but did not make extra efforts to keep up with the rest of the class. Although the “in limbo” group was keen on where they stood academically (i.e., susceptible to BFLPE), these “unruly” students showed little concern in that regard, as indicated by their positive responses to BFLPE. Jiang was a distinct example.

Jiang was a physics doctoral student in a research university in Western United States when he was interviewed. Jiang articulated well this group’s attitude toward higher education: “It gradually became clear to me that college should not be just about studying. It’s about finding your niche, rather than achieving your life ambitions” (Case 10, December 20, 2008). Compared with the “well adjusted” in attitudes and work ethic, the “unruly” students were more “spontaneous,” going wherever their interests led them. Jiang enjoyed a wide range of courses, including humanities, and particularly enjoyed a course on pottery arts. He did not like many course enrollment restrictions and disciplinary boundaries. For the courses in his major, physics, he did not particularly care about “doing well,” but enjoyed those professors who could trigger his intellectual interest. His lack of focus and “self-discipline” caused a tension between him and his father (mentioned earlier), who held high expectations of Jiang, leading to a tense relationship between an increasingly controlling father and an increasingly rebellious son. The dilemma for Jiang was between working hard to meet the academic challenges in the SCGY program and being himself, pursuing his own passions and finding his own niche.

The “unruly” ones played the game by their own rules. Their coping task was to negotiate the academic demands and personal freedom, and stay in the game while seeking opportunities to explore a wide range of interests and options. Yet they were often undecided about what they were going to do for their life, a state of identity moratorium (Marcia, 1988). They had their own developmental, social, and emotional problems to cope with, as was the case with Jiang, who had many occasions of feeling confused and lost in direction. Ultimately, their clarified sense of self would come to rescue, as shown later in Jiang’s story.

Drifting Away from the Game: The “Lost” Ones

There was a small group of four or five students that showed a pervasive negative pattern of both AC and AG. Playing video games and sports consumed most of their time outside of the classroom. They were gradually drifting away from the mainstream and became a marginalized group either because they found it hard to keep up (indicated by negative BFLPE for two of them) or simply because they lacked self-control and self-discipline, a problem not uncommon among adolescents. While playing, socializing, girl-chasing, cramming for exams, and copying others’ work, this group of students also suffered psychologically for the lack of direction and purpose. A difference between the “lost” ones and “unruly” ones was, while the “unruly” ones seemed to have newly found interests and priorities periodically, the “lost” ones had no priority. Some of them were immersed in video games, others were engrossed in sports. Some of them almost gave up the “academic game” and found a psychological haven in video games. We are unsure how much of this behavioral pattern reflects escapism (from the tough reality) and how much was sheer immaturity (e.g., lack of self-discipline and self-control in the absence of adult supervision). The limited cases in this sample indicate both. For them, growth in terms of development of social-emotional and behavioral autonomy was an ongoing process; without it, coping was passive and characterized by avoidance and escapism; there was little AG going on.

Divergent Trajectories and Paths at the Social Level: Group Formation and Self-Socialization

Formation of divergent trajectories and pathways is a social as well as temporal process. In the Cope-and-Grow model, the “social network” factor is not merely a structural context for the early entrants. It also operates as a social process in terms of social dynamics, group formation, and self-socialization. Yilong identifies himself as part of the most marginalized group:

We had a lot of fun together, classmates liked me, particularly those who didn’t do well (laugh). Gradually the SCGY was stratified, with the best students at the center, followed by a middle group, and then us, those who did not study hard. (Case 17, March 13, 2009)

Jiang recalls: “I had two kinds of friends, one studying very hard and the other playing very hard. I was in-between” (Case 10, December 20, 2008).

Distinct patterns of social interaction were found based on nominations by 13 interviewees of the persons to whom they were most close while at the SCGY. The female students made a closely knit group, given their “minority” status and living in close proximity (back-to-back dorm rooms). The male students were divided more based on interests (e.g.,

sports) and habits of work (self-study at night) rather than physical proximity. Peer group formation and self-categorization seemed to be one of the mechanisms for shaping the divergent patterns of social and AC and AG experiences (Harris, 1995).

Claim 3: Coping and Growing Have a Dynamic, Reciprocal Relationship Over Time: Cope to Grow and Grow to Cope

Cope and Grow is never a single event fixated in time and space. Rather, it is a continual process of making adaptive changes and negotiating one's life path. Claim 2 concerns interindividual difference in terms of divergent patterns of Cope-and-Grow. Claim 3 presented here focuses on intrapersonal changes over time. Enactive growing experiences such as taking personal initiatives or forming sustained interests can extend to multiple situations (e.g., from classroom to library or internet sources, from signing up for a lab project to seeking help from a professor) and thus more proactive and boundary crossing (Barron, 2006). Reflective growing, such as seeking a clear personal direction and identity, is also a gradual crystallizing process. While enactive coping experience might deal with an impinging problem, reflective coping (e.g., rumination) can last for weeks and months, as several early entrants did when dealing with BFLPE. Intrapersonal changes over time show two patterns. One is that successful coping led to resilience; it turned coping into a growing experience. We call it cope to grow. The other is that effective coping did not occur until significant growing took place (e.g., a much clearer sense of self emerged). We call this pattern Grow to Cope.

Cope to Grow and Grow to Cope

May provided a distinct example of Cope to Grow: May selected physics as her major, not because it was easy but because it was hard for her. For May, it was a growing pain to discipline herself. "I am by nature an undisciplined person, but physics is a rigorous discipline, and since I started my college, the 4 years of my college was a painful process of adaptation," May said (Case 21, March 21, 2008). May's coping with the challenges in physics best illustrates how successful coping enhances growth (i.e., gaining strengths).

Jiang provided a good example of Grow to Cope. Jiang admitted in the interview that he was not as focused and did not know what he exactly wanted in those undergraduate years. Jiang was academically a "comeback kid" and he was still active in his roller-skating endeavor. His lab experience in physics can be truly characterized as "crystallizing experiences" (Walters & Gardner, 1986):

From the freshmen year up to the lab work, what we had learned from physics classes is sheer knowledge. I didn't understand

until I got the lab experience that what kind of ability I need to possess, not just what I know, but what [problems] I have to deal with. In previous years I had no clue what research looks like, the process of problem finding and problem solving, which you cannot get from physics lessons. I gradually learned this. Then my attitude toward learning and methods of study [changed], and I was more and more interested in physics, more and more appreciative of its beauty. At the beginning, what you see are formulas and theorems, but gradually you found the logic behind, the process that led to their discovery, which was fascinating. Then you approached the knowledge from this angle, not just treating it as fixed formulas, but taking it as a whole, and see what's behind. (Case 10, December 20, 2008)

Grow to Cope is also evident in that some early entrants who were susceptible to negative BFLPE also learned to cope and find their own niches:

When approaching graduation we were older and more mature, and would not always compare with others on everything, and would not feel I was shortchanged. When seeing others stronger than myself in some aspects, I would think of other aspects where I was stronger—I had learned to regulate myself; I gradually learned psychological self-regulation during these 4 years. (Case 38, August 17, 2009)

Coming of Age: Building a Commitment

It is not trivial to note that when the early entrants got to their junior year, they were approaching 18 years of age. Many interviewees mentioned that they started to get the right feel about their respective disciplines (majors) later in their college years. They gained a better sense of how to approach learning in a personally more meaningful way, rather than merely making the grades. In other words, growth over time came to support successful coping. This developmental progression (enactive growing) was partly facilitated by lab experiences. Case 6 stated, "When you got into the lab in the junior year, you realized that many things you have learned were useful. It made learning easier, and therefore my grades also improved" (Case 6, December 11, 2008). Some wished they had the lab research experience earlier, which "would make their study and life more meaningful" (Case 19, March 16, 2009).

Seeking meaning in one's life was a general theme for this group of teenagers in the middle of their college career. It was a true sense of growth. Such meaning-seeking acts were not confined to science labs. Ron also regrets that he could have been more reflective during his undergraduate years when he explained, "I wish I came to the realization earlier that college life is not just about chatting with classmates or playing soccer; we should get a better sense of what college can bring us, what we can do for ourselves" (Case 33, April 12, 2009).

The SCGY students truly came of age. The SCGY students were learning life lessons. They overcame many hurdles, social as well as academic, and enjoyed many moments

of personal triumphs, whether they were “in limbo” or “lost” at some junctures of their college careers. Half of the interviewees went abroad (most to the United States) after graduation. About half of them have received their doctoral degrees as we are writing this report. In their late 20s now, many of them have married and lived a happy life. The Cope-and-Grow story comes full circle.

Discussion: Comparing Theoretical Perspectives

Coping and growing are two constructs that seem to capture the essence of lived experiences of the early entrants. Early college entrants have many opportunities for personal growth as well as many daunting challenges with which to cope. They had to make critical decisions their age peers did not have to make. The developmental, academic, and social challenges conspire to accentuate both growing and coping experiences, as discussed in Claim 1. We evoke the concept of “characteristic adaption” to explain interindividual differences in Cope and Grow that was fleshed out in Claim 2, and the dynamic interplay of coping and growing and developmental maturation to explain intrapersonal changes over the course of 4 years of college explained in Claim 3. In the following section, we discuss how the Cope-and-Grow model contributes new insights into the effects of early college entrance programs, and how it enriches and modifies existing theories.

Aptitude Theory

One theory we used to guide the study is aptitude theory (Lohman, 2005; Snow, 1992). The major premise of the theory is that certain aptitudes make the person better fit to benefit from a particular instructional condition. The qualitative data in this study provide a good source for understanding aptitude as contextually bound and multifaceted. One insight from our results is the early college entrants brought different sets of aptitude to the SCGY program that reflect both their respective personal histories as well as capabilities and dispositions, some of which echo our traditional definition of aptitude, such as readiness for high-level mathematics or persistence in the face of setbacks, but others may not, such as coping skills, growth mindsets, and susceptibility to BFLPE (Lohman, 2005). Aptitude theory is important in explaining why the “well adjusted” group was so successful in beating the odds socially and academically. Additionally, as posited in Claim 2, why a small proportion of the early entrants did not fare as well in the SCGY program.

One contribution of this study to aptitude theory is the findings that aptitude is a dynamic, evolving quality, rather than a static one. For example, May did not start strong in physics, but learned to be mentally more fit as an adaptation to the demands of physics. Kai was perfectionistic by temperament, but he learned to prioritize and be less fussy about details. These stories of successful adaptation suggest a more

dynamic, reciprocal process of cope to grow and grow to cope over time.

Developmental Asynchrony Theory of Giftedness

This theory of giftedness proposes an asynchrony of advanced intellectual development and relatively lagging-behind social and emotional development (Morelock, 1996). There were clear instances of developmental asynchrony in this study. The theory helps explain, for instance, why some SCGY students seemed to be highly capable intellectually on the one hand, but behaved naively or immaturely in social settings. For early college entrants, possible developmental asynchrony is compounded by an accelerated academic life (e.g., making decisions about majors and career paths). Developmental asynchrony can be exacerbated or even caused by the environmental demands. This study contributes to the developmental asynchrony theory by showing that manifestations of developmental asynchrony can vary. There are many instances of such asynchrony in the “unruly” and the “lost” groups, suggesting counseling needs (e.g., interventions on emotional issues and career guidance). However, it does not seem to explain the “in limbo” and “well adjusted” groups well. For example, the “in limbo” cases show strong AC but weak AG, which can be more parsimoniously explained by academic setbacks and negative BFLPE than the developmental asynchrony theory. Moreover, the “well adjusted” pattern seems to refute the developmental asynchrony theory altogether. The discrepancies suggest that the developmental asynchrony theory may be applicable to some but not all precocious students, even in taxing conditions such as the highly selective and competitive SCGY program.

At a more theoretical level, the developmental asynchrony theory may be flawed, as it assumes that the asynchrony is trait-like rather than a process. Although dynamic instability is a catalyst for growth (suggested by Cope to Grow and Grow to Cope), the notion of developmental asynchrony should be tempered by the idea of developmental synchronization through self-organization and self-direction (Dai & Renzulli, 2008). The intrapersonal dynamic interplay and changes over time indicate a tendency toward intrapersonal synchronization (self-organization) out of any possible developmental asynchrony through adaptation.

Talent Development Theory

The SCGY graduates we interviewed, can be seen as going through a prolonged talent development process of being acclimated, honing skills, sustaining motivation, finding one’s unique strengths, and a niche in a domain of their choosing. The talent development literature shows consistently the importance of growing, in terms of developing deep engagement (Bloom, 1985), intrinsic motivation (Csikszentmihalyi et al., 1993), mentorship (Bloom, 1985), and a sense of destiny and identity, and related self-confidence (Feldhusen,

1986). It also shows that successful coping is crucial for further development of talent (Subotnik & Jarvin, 2005), and coping efforts need to be supported by guidance and counseling (Kitano, 2003). The divergent patterns and intrapersonal changes in Cope and Grow show these to be essential elements of growing experiences. For instance, it is consistent with research findings from elite music schools, such as Juilliard that there is a distinct phase when talented music students come to restore their confidence as future professionals, which is a distinct Cope-and-Grow phenomenon in talent development (Subotnik & Jarvin, 2005). It is also consistent with AC of talented high school students in International Baccalaureate or other advanced academic programs (Shaunessey & Suldo, 2010). In this sense, the Cope-and-Grow model can be seen as addressing an affective component of talent development.

From Characteristic Adaptation to Maximal Adaptation

In explaining person–situation interactions involved in talent development, Dai (2010) argued that *characteristic adaptation*, not traits, is an appropriate level of analysis. Characteristic adaptation reflects an understanding that “human lives vary with respect to a wide range of motivational, social-cognitive, and developmental adaptations, *contextualized in time, place, and/or social role*” (McAdams & Pals, 2006, p. 208, italics added). For this study, the most distinct “characteristic adaptation” was revealed by four divergent patterns of Cope and Grow. The Cope-and-Grow model of strivings for academic excellence seems to explain successful and less successful cases equally well. Characteristic adaptation in the Cope-and-Grow model reflects a social process whereby individuals with a particular set of personal resources, cognitive or affective, position and reposition themselves in their social roles, and self-identities. Sensitivity to BFLPE, coping strategies, intrinsic academic motivation, all represent aspects of characteristic ways in which individuals deal with environmental challenges (Cope) and seek self-development (Grow).

Talent development involves forming enduring interests, purposes, and commitments (Dai, 2013; Dai & Renzulli, 2008). This process is anything but easy. Many early entrants mentioned that they could have been working harder or more focused, and would have benefited from counseling services that could help them cope with disturbing emotions and clarify their career orientations. This suggests that there is room for improvement in helping the early entrants to cope and grow. This leads to the conclusion that the concept of *characteristic adaptation* is too descriptive, not sufficient for prescribing educational provisions. Talent development, as a normative endeavor, should strive for *maximal adaptation* through social support and interventions, as well as dedicated personal efforts (see Figure 1; Dai, 2014; Dreyfus & Dreyfus, 1986; Ericsson & Lehmann, 1996).

Maximal adaptation means that some of the Cope-and-Grow patterns can be changed, even reversed, so that not only the “well adjusted” can thrive in the challenging conditions, but those “in limbo” can find self-confidence, and the “lost” ones can retain or regain purpose and direction through growth-promoting interventions. Maximal adaptation also means that positive intrapersonal changes over time can be promoted by making better connections between content mastery and personal meanings (e.g., social causes), between coping strategies and growing experiences; in other words, cope to grow and grow to cope can be deliberately promoted in curriculum, and their experiences can be further optimized through counseling and guidance, supporting their self-development in terms of intrinsic interests, personal niches, and career goals, as Olenchak (2009) discusses, as well as coping efforts. Maximal adaptation implies that, on the individual’s part, typical or characteristic engagement is often not sufficient; strivings for maximal grip or mastery is needed to sustain growth (Dai & Renzulli, 2008).

Limitations, Generalizability of the Findings, and Future Directions

The present study makes three theoretical claims and develops a model of cope and grow grounded on the interview data. The verbal protocols we gathered from the interviews represent retrospective accounts of what happened (objectively and subjectively) many years ago. They were subject to the hindsight bias; that is, people can attribute their current thoughts and feelings to the past as if they felt and thought that way all along. Retrospective accounts can also be influenced by the motivation to maintain positive feelings about themselves (Sklad, 2012). Despite these threats to data credibility, the problem of the accuracy of memory and representation is alleviated somewhat by the fact that given the 4 to 5 year distance from the graduation, the interviewees were quite candid about their youthful mistakes and follies, as indicated in the protocols. On the researchers’ part, we tried to maintain a good balance between being an insider who can empathize with the interviewee during the interview and being an outsider who can maintain an objective stance.

Another possible limitation is that there could be a selection bias in that we did not collect information about experiences and characteristics of those “nonparticipants.” The fact that the sample consists of two thirds of the cohort and that it shows wide variations in responses alleviates this concern to some degree. A related concern is that there can also be a cohort effect in that the cohorts of SCGY before or after the one we sampled might show patterns quite different from the ones we observed. Historical–contextual factors such as the transition from a 5-year to 4-year program (which was the case for this cohort) can affect student experiences in a significant manner, as indicated by comments of some early entrants that curricular arrangements were a bit messy in the transition. Anecdotal information also indicates that the social

climate in 2000s was quite different from that in 1990s (e.g., more competing attractions or “distractions” on college campus, such as video games, for adolescents in more recent years). There is also a social–cultural aspect of the lived experiences, including some cultural characteristics of the education system, which may not be generalized to other cultures.

With these caveats, most findings about the lived experiences of these precocious adolescents in the prestigious early college entrance program in China are surprisingly consistent with what we know from evidence gathered in the Western societies. For example, the BFLPE found in this study corroborates the extant research yet adds more nuanced understandings than the theory itself. Instead of seeing BFLPE situations as negative, many interviewees saw it as motivating (Dai & Rinn, 2008). Taken together, the three major claims regarding Cope and Grow seem to be ubiquitous for early college entrants, supporting and enriching the existing theories reviewed earlier. The grounded theory approach used in this study was an inductive attempt to generate new conjectures, hypotheses, and theoretical insights. More work needs to be done to consolidate (and modify) the theoretical arguments advanced in this study, and test them in other settings. For example, the model can be generalized as an affective component of talent development (Dai & Speerschneider, 2012). In each stage, Cope and Grow has its own distinct content and process. This developmental specificity warrants research in the future. Also, the Cope-and-Grow theory, though grounded in empirical research, suggests ways for optimal development and is thus prescriptive rather than merely descriptive. The validity and efficacy of the model can be tested by designing and enacting guidance and counseling interventions accordingly.

Appendix A

Semistructured Interview Protocol

A. Experience

1. Describe the gifted program you participated in.
2. Describe your experiences in the program.
 - What is particularly challenging about the program?
 - What part of the program did you particularly like?
3. Describe the positive and negative experiences you had in the program that stand out.
4. In hindsight, do your experiences have to do how the program was set up or with you as a person or both?

B. Selection/Placement

5. What do you remember when you were selected for the program?
6. How did you feel when you were first selected into SCGY program?
7. Describe changes you felt over time during the 4 years when you were at SCGY.

8. From your point of view, what were advantages and disadvantages of participating versus not participating in this program for your personal growth?

C. Curriculum/Instruction

9. How would you describe the curriculum (e.g., scope and pace) in your program?
10. What did you typically do to handle the academic tasks?
11. How would you describe your experience in classroom instruction?
12. What changes did you experience or observe in the way you studied or worked on academic subjects during the 4 years?

D. Social/Emotional

13. Describe your social interactions with others over time during SCGY.
14. Please describe positive and negative social experiences that stand out.
15. Describe your classmates, peers, and friends with whom you interacted on a regular basis and what kind of role they play in your life.
16. How were your interactions and relationships with your parents and sibling (if any) while you were at SCGY?

E. Retrospective Insights

17. Now you graduated from the program for several years, what would you like to see changed in the program that might have improved your education?
18. How would you describe the role your participation in SCGY program played in your life?
19. Do you have any regrets as to what you could have done during SCGY?
20. What would you do if you had a chance to relive these early years of your life (what part you would like to keep and what part you would like to change)?

Appendix B

Emergent Concepts and Themes in Open, Axial, and Selective Coding

Open Coding (21 Most Referenced Codes)

Open codes	Number of sources (persons)
<i>Social</i>	
Good relationship with parents	30
Harmonious relationship with peers	28
Precious life-long friendship/the important role of friends/peers	23
Limited social interactions and social opportunities	20

(continued)

Appendix B (continued)

Open codes	Number of sources (persons)
Overall the SCGY experiences were very positive	18
<i>Academic/social</i>	
The role of individual professors in effects of classroom instruction	22
Peers' mutual stimulation for excellence	21
The curriculum offerings were very flexible and encouraged free exploration	20
Cramming for exam	20
Regrets that one could have been more diligent and hardworking	19
Following the crowd in taking GRE and TOEFL	18
Academic self-concept affected by the presence of strong peers	17
The curriculum setup could have been more flexible and comprehensive	17
Special resources and teachers	16
Evenly distributed, focused study	15
Performance pressure was high	12
<i>Academic/developmental</i>	
Mimang ("lost in direction"); lack of clear goals	20
Continued working hard in the first year just as in high school	18
Independent decision making	17
The need for psychological counseling and career guidance	15
Top students in high school	15

Axial Coding

Twelve categories (based on 69 open codes)

1. *Preconditions Prior to College* (3 codes; e.g., "high achievers in high school").
2. *Curriculum Structure* (12 codes; e.g., "The curriculum setup has many strengths such as strong foundation, flexibility"; "curriculum setup could have been more comprehensive"; "curriculum problems were minor").
3. *Social Relations and Activities* (9 codes; e.g., "good relationship with parents"; "harmonious relationship with classmates").
4. *Intellectual Peers* (5 codes; e.g., "peer mutual stimulation for excellence"; "peers with similar backgrounds and interests"; "big-fish-little-pond effect").
5. *Social-Emotional Conditions* (4 codes; e.g., "the need for counseling and guidance"; "critical transition from adolescence to young adulthood").

6. *Academic Effects* (10 codes; e.g., "the role of professors in the effects of classroom instruction"; "academic competition"; "big-fish-little-pond effect").
7. *Social Effects* (4 codes; e.g., "precious life-long friendship"; "peer mutual stimulation for excellence"; "the important role of friends/peers").
8. *Freshmen Experiences* (4 codes; e.g., "continued working hard in the first year just as in high school"; "the math mid-term shock").
9. *Sophomore/Junior Experiences* (7 codes; e.g., "following the crowd in taking GRE and TOEFL"; "mimang" ["lost in direction"]; lack of clear goals").
10. *Senior Experiences* (3 codes; e.g., "enlightening lab experiences").
11. *Study Strategies* (5 codes; e.g., "cramming for exams"; "consistent hard work").
12. *Decision Making* (3 codes; e.g., "independent decision making").

Selective Coding

Academic coping (the number of persons referencing a code; i.e., sources)

1. The curriculum setup problematic (e.g., heavy course load, redundant coverage; 13 sources).
2. Decreased self-concept (17 sources).
3. Pressure and stress (12 sources).
4. Academic competition (10 sources). (Codes 2, 3, and 4 combined indicate the BFLPE).
5. Consistent hard work (15 sources).
6. Cramming for exams (Negatively coded; 20 sources).
7. Copying assignments from other students (Negatively coded; 11 sources).
8. Skipping classes and playing video games or sports excessively (Negatively coded; 4 sources).

Academic growing

1. The curriculum setup has many strengths (e.g., strong foundation, flexibility; 20 sources).
2. Curriculum problems were minor (14 sources).
3. Peer mutual stimulation for excellence (21 sources).
4. Positive interaction with professors (4 sources).
5. Learning motivated by intrinsic interests (6 sources).
6. Enlightening lab experiences (5 sources).

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Note

1. To protect the privacy of interviewees and persons they mentioned, pseudonyms are used throughout this article.

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