Chinese college students' noncognitive skills development at Sino Joint Venture universities: a case study of Duke Kunshan University

by

Long Li

B.S., Ningbo University, 2009
M.A., Fudan University, 2011

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

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Department of Curriculum and Instruction
College of Education

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Manhattan, Kansas

2024

Abstract

In the context of rapidly advancing technologies, the significance of noncognitive skills is increasingly recognized by academia and industry as essential qualities in the era of knowledge economy. However, the study of Chinese students' noncognitive skills development during their college period in China was scarce. This research adopts a case study approach to explore Chinese students' noncognitive skills development at Sino Joint Venture Universities, with Duke Kunshan University (DKU) as the research site. Situated learning theory addressing learning that occurs through social interaction and engagements is employed as the theoretical framework. Five senior students were interviewed and thematic analyses were conducted. This research revealed that these participants generally exhibited strong communication, collaboration, leadership, problem-solving, and creativity competencies. However, rooted globalism and purposeful life were not prominently observed in this research. This study identified three themes related to how DKU fosters Chinese students' noncognitive skills development: educational engagements at DKU, responsive teacher-student relationships, and DKU's authentic and international contexts. While contributing to academia and practice in studying the mechanism of nurturing noncognitive skills during college, this research also offers valuable insights into international education cooperation, administration, and policy development.

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Approved by:

Major Professor
Dr. Spencer Clark

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Dedication

This paper is dedicated to all the learners no matter where they are in this world who manage their best to learn, live, and fulfill their purposes. It is the crystallization and culmination of my academic journey in the educational domain.

Chapter 1 - Introduction

In the contemporary landscape, our society is evolving into the knowledge economy era, marked by a profound focus on technology and innovation. Simon (2017), the previous vice chancellor of Duke Kunshan University, addressed that new advanced technologies like artificial intelligence and quantum computing substantially change the economic landscapes and innovation develops at an accelerated pace. In this era, the significance of noncognitive skills is increasingly recognized by academia and industry as essential qualities. The shift in the development of technology engenders new trends toward the qualities and skillsets of human resources. Hendarman and Tjakraatmadja (2012) mentioned that "the knowledge economy of the twenty-first century demands a set of new competencies, which includes not only hard skills but also such soft skills as problem-solving, analytical skills, group learning, working in a team-based environment, and effective communication" (p. 36). Oliveira and Matos (2023) pointed out that "the knowledge economy relies on a highly skilled workforce capable of acquiring, applying, and adapting knowledge to address complex challenges" (p. 1008). Godwin and Altbach (2016) raised the concern that a globalized economy increases knowledge-based careers in both developed and developing regions, which require labor forces with more flexible, globally competent, and critical competence.

Noncognitive skills have been broadly recognized to have a positive relationship with students' academic attainment, mental health, and career performance in recent years. These skills affect individuals' economic behavior and their labor market outcomes as well (Akay & Yilmaz, 2023; Heckman et al., 2006; Hoschler et al., 2017). Furthermore, plenty of studies show that noncognitive skills are effective in predicting educational attainment, labor market success,

health, and the likelihood of criminality (Kautz et al., 2014). These skills are increasingly considered to be as important as, or even more important than, cognitive skills or IQ in explaining academic and employment outcomes (Schoon, 2013). For instance, research shows that noncognitive skills have important implications for academic achievement (Choi et al., 2022; Dee & West, 2011; Frank, 2020; He et al., 2021). It is significant to know that the study of noncognitive skills has global value, as Kautz et al. (2014) point out that noncognitive skills are universally valued across cultures, religions, and societies.

In facing the challenge of the knowledge economy and new definitions of human resources, Simon (2017) could not help asking what our higher education could do. This question points out an urgency to understand the development of noncognitive skills during higher education. This research investigates Duke Kunshan University's education in cultivating noncognitive skills for Chinese students. Why Chinese students? Asian countries are predominantly obsessed with and adapt high-stakes tests (such as Gaokao) for education ends. In the article *Can China Lead,* Abrami et al. (2014) pointed out that "China's examination hell" (by the scholar Ichisada Miyazaki) could not cultivate innovative students. By being deeply addicted to high-stakes tests, China favors the Gaokao system to decide students' future which emphasizes memorization and drill. However, Pang et al. (2020) argued that the Gaokao system could lead most students to overemphasize higher scores on exams and rote in daily teaching and learning in basic education. "The senior high schools were quite directly preparing students for colleges and universities by simply teaching them how to get high scores in various exams but ignored the development of students as the whole person in moral, intellectual, physical, aesthetic, and personality" (Pang et al., 2020, p. 38). Long and Li (2008) argued that the Gaokao system hinders an individual's socialization development as it makes students obsessed with the Gaokao

test preparation without any social interaction. The experience of Gaokao has a certain negative impact on the cultivation of noncognitive skills. Muthanna & Sang (2015) used a critical literature review to reveal that "almost all researchers call for a reform of the Gaokao in a way that reflects flexibility, students' autonomy, and critical thinking" (Muthanna & Sang, 2015, p. 6)

A unique setting for this research is DKU which belongs to the Sino Joint Venture Universities and espouses a liberal arts education. Liberal arts education is generally regarded as an education system that could cultivate a whole person. Such education is an appropriate kind of education for the ever-changing working environment and skill requirements of the 21st century (Cheng & Wei, 2021). Furthermore, they summarized the liberal arts education practices in the U.S., Hongkong, and China mainland to conclude that "liberal arts education not only prepares students with the right type of skills to meet the challenges of the twenty-first century but also does so in a cost-effective way" (Cheng & Wei, 2021, p. 3). A broad understanding is that liberal arts education can lead to the outcome of expected noncognitive skills (Cameron et al., 2018; Cech, 1999; Dorman & Brown, 2018; Seifert et al., 2008). Yet, one big challenge is that liberal arts education is subject to open enunciation and adaptation since there is not a consensus and detailed outline guiding the implementation of liberal arts education, each institution can interpret and localize this education for its purposes. As for this research, empirical evidence signifies that Chinese students at DKU outperform noncognitive skills. Investigating the underlying mechanism can shed insight into the mechanism of DKU's educational model and prove invaluable to a wide range of stakeholders.

Additionally, this researcher presents a vignette to serve as a support for this research and meanwhile unhide the challenges of promoting noncognitive skills development in China.

Time flew back to the fall of 2022 when I traveled as an undergraduate recruiter in Beijing, China, for DKU under the cloak of unpredictable COVID-19. During the whole journey, I was anxious and scared by the disruptive effects caused by COVID-19, when this challenging journey approached its end, the dean of the China Enrollment Management Office, two DKU professors, and I were invited to attend the DKU parents' union event. On behalf of DKU, we were enthusiastically welcomed by DKU's students' parents. As a custom, each parent introduced their children and narrated how they selected DKU. Although such wording purposefully catered for the DKU, nevertheless, one mother's speech raised my attention, she reflected that the year before, she participated in the city information session organized by me, where she had a conversation with our dean, it was when and where she started to know DKU and liberal arts education, she joked that it was not a happy conversation.

At that time, our dean was not that happy as she nagged to ask questions like what DKU's popular majors were, how students gained internships, etc. Under her description, these bunches of superficial questions eventually led the dean to suggest she should not let her daughter apply to DKU. Of course, she did not listen to this advice with a laugh. Her daughter was successfully admitted and became a member of the newly admitted class of 2026. She voiced that she saw her daughter's incredible growth at DKU and was truly thankful to DKU. She reiterated that her family made the right decision. Since then, I have been intrigued by her story just like some other stories shared by DKU students.

Personally, this research satisfies my curiosity in uncovering the mechanism of DKU's education and explaining how such transformative changes happen.

Statement of Problem

Noncognitive skills are assumed to be essential in one's whole life. "The economic and societal changes in relation to technological development seem to be regarded as the most important driving forces that call for these 21st-century skills" (Voogt & Roblin, 2010, p. 11). Previous scholarships evidenced the close connection between academic, career, and even mental health with noncognitive skills. These skills affect individuals' economic behavior and their labor market outcomes (Akay & Yilmaz, 2023; Heckman et al., 2006; Hoschler et al., 2017). Studies show that noncognitive skills are effective in predicting educational attainment, labor market success, health, and the likelihood of criminality (Kautz et al., 2014). Schoon (2013) stated that noncognitive skills outperform cognitive skills or IQ in explaining academic and employment outcomes. Additionally, Dee and West (2011) saw that noncognitive skills have important implications for academic achievement as well. What is more, it is a trend that noncognitive skills are valued by diverse cultures, religions, and societies (Kautz et al, 2014).

The global awareness of noncognitive skills aligns with the development of Chinese education for advocating general or quality education (Su Zhi JiaoYu). The installation of liberal arts education in China is an ongoing endeavor. "Liberal arts education could assist students to develop moral habits and good citizenship by means of extra-curricular and community-based activities, student-student and faculty-student interaction, and on-campus residential experiences" (Pang et al., 2020, p. 6). Ferrall (2011) argued that liberal arts education develops curiosity, creativity, critical self-reflection, a sense of social responsibility, and communication skills. Nussbaum (1997) stressed that liberal arts education could cultivate students' humanity and narrative imagination and turn them to be citizens of the world. "All students are taught in an interdisciplinary manner and encouraged to engage in high standards of intellectual inquiry,

critical thinking, and creativity within a core curriculum that offers a whole-person education based on experiential learning, team-building activities, and emotional-sensitivity training (Jung et al., 2016, p. 28). The previous scholarly findings lead to the understanding that liberal arts education genetically nurtures noncognitive skills.

This research explores the mechanism of Chinese students' noncognitive skills development in Sino Joint Venture Universities with a case study approach of DKU. DKU is a small residential liberal arts college, belonging to one of ten Sino Joint Venture Universities in China. Wu et al. (2022) drew the annual employment quality reports by six Sino Joint Venture Universities to find out whether graduates had distinct advantages regarding further study and employment. The overall employment rate reached 95.84% (Wu et al., 2022). The success of these universities won the attention of diverse stakeholders. Typically, DKU is missioned to cultivate global citizens (Liu, 2018). Kirby (2014) claimed that "Duke Kunshan University is without question the most ambitious international educational enterprise in China since the days of Yenching University (Peking University)" (p. 151).

Meanwhile, Chinese students are the target groups at DKU for this research as they experience the Gaokao, which assumes that they have a weak foundation in noncognitive skills development from the K-12 setting. Guo's (2022) research revealed that most Chinese high schools focus exclusively on Gaokao, regarding Gaokao as the only measure of high school success, ignoring students' personality development and suppressing students' individuality. Long and Li (2008) argued that the Gaokao system hinders an individual's socialization development as it makes students obsessed with the Gaokao test preparation without any social interaction. Lewis (2018), the founding president of Yale-NUS College in Singapore, articulated that Asian educators see that while their students have excelled in cognitive tests, their

universities fail to encourage innovation and lack opportunities in some of the American higher education systems. Jiang (2013) criticized that colleges and universities in China overemphasize rote memorization, a top-down instruction style, and a near-total reliance on exams to evaluate progress. When all variables are juxtaposed together, this researcher confidently believes that this study significantly unhides the mechanism of Chinese students' noncognitive skills development at DKU.

Purpose of the Study

This research aims to understand Chinese students' noncognitive skills development at Sino Joint Venture Universities, with a case study of DKU which offers liberal arts education in China. Rich empirical evidence (i.e. career placement reports, student self-reports, feedback from employers) shows that Chinese students' holistic performance has been substantially improved at DKU, which signifies the correlation between DKU's education and Chinese students' noncognitive skills development. Through this qualitative research, the researcher examines how DKU's education fosters Chinese students' noncognitive skills development. Based on previous research, noncognitive skills are found to be loosely structured and subjectively defined, this research takes advantage of the noncognitive skills model of seven animating principles missioned by DKU as the noncognitive skills framework.

The significance of this research lies in multiple folds. First, this research can engender insights into DKU education from the perspective of its Chinese students, which could add to the insufficient research on noncognitive skills development towards disadvantaged groups. Chinese students, subjected to their education journey, generally believe that they do not experience sufficient education in noncognitive skills development. Second, this research can explore a

mechanism for cultivating noncognitive skills development during the college period. Third, this study could produce real-world lessons in university administration and development for DKU and other universities. For instance, DKU can further investigate concerns by its students and execute correspondent measures to reinforce positive practices and adjust negative ones.

Last but not least, this research can generate insights into cross-national education and policymaking. Significantly, the exploration of DKU's education model sheds light on the Sino Joint Venture Universities, assisting audiences in understanding the novel education straddling Eastern and Western education. Such findings provide a sample for other international and global education initiatives in other countries.

Research Questions

This research provides in-depth insight into Chinese students' noncognitive skills development at Sino Joint Venture Universities through a case study of DKU. Three main questions effectively guide this research and are presented below.

1. Which specific noncognitive skills have Chinese students identified as being significantly improved during their study at DKU?

2. How do Chinese students perceive the impact of improved noncognitive skills on their overall personal development and well-being?

3. How does DKU facilitate Chinese students' noncognitive skills development? This is the overarching question for this research.

The first and second questions aim to find out what and the third question targets getting insight into how.

Methodology

This research utilized a qualitative research method to investigate Chinese students' noncognitive skills development at Sino Joint Venture Universities with a case study of DKU. Creswell (2013) indicated that qualitative research allows for an in-depth understanding of personal experience and could be employed to explore a detailed understanding of the issue. The case study method was employed as this method can study a particular case or several cases within an in-depth examination (Lichtman, 2012). Also, the case study is effective in analyzing a certain phenomenon in a bounded context (Merriam, 1998). Furthermore, this research benefited from the guidance of Merriam's seminal work (1998).

In this case study, five Chinese student participants in the class 2024 at DKU were recruited and interviewed following the one-on-one semi-structured interview format. The interview with each participant was around one hour and was recorded, and then the audio was transcribed and member checks were conducted. To support the research and triangulate the data, observations, official documents, and field notes were purposefully conducted, collected, and analyzed. A detailed plan for data collection and analysis is presented in Chapter 3.

Theoretical Framework

Situated Learning Theory serves as the theoretical framework for this research. Situated Learning Theory is a social learning theory elaborated on by Lave and Wenger (1991) after they interrogated the traditional apprenticeship model. This theory addresses learning through social interaction and engagement, creatively dealing with learning as "an integral and inseparable aspect of social practice" (Lave & Wenger, 1991, p. 31). Hanks (1991) pointed out that rather than asking about the cognitive processes and conceptual structures, this theory asks "what kinds

of social engagements provide the proper context for learning to take place" (p. 14). Lave and Wenger (1991) regarded "legitimate peripheral participation" as the core of defining learning as situated activities and this concept "is proposed as a descriptor of engagement in social practice that entails learning as an integral constituent" (p. 35). Legitimate peripheral participation provides access to a nexus of relations, explores relations, and derives from the richness of its interconnections. To better enunciate the relations through addressing contexts, Lave and Wenger (1991) employed the terminology communities of practice and defined "a community of practice is a set of relations among persons, activities, and the world over time and in relation with other tangential and overlapping communities of practice" (p. 98).

While exploring a mechanism for cultivating noncognitive skills to supplement the ambiguities and subjectivity of liberal arts education, the researcher of this study saw that situated learning theory offered a viable approach to describe the ascendance process of noncognitive skills. This theory also reflects the educational logic that DKU aims to advocate. Meanwhile, situated learning theory was relevant to the concept of the whole person (Lave & Wenger, 1991). As DKU embraces no traditional instructional teaching, boundaries, and hierarchic structure, Lave and Wenger's (1991) consideration of rethinking schooling in situated learning makes sense in this research. Situated learning theory is the right theory that fits well to study learning under social and cultural contexts (Sterret et al., 2015).

Significance of the Study

The contribution of this research lies in both academia and practice. As for academia, first, this research adds to the gap in research on noncognitive skills during college years in China. This study explored an educational model effective in cultivating noncognitive skills.

Second, the findings offer new insight for researchers and pertinent stakeholders into how to scaffold students' noncognitive development when high-stakes tests are mainly and favorably employed. This research can be a valuable lesson that could be shared by other Asian countries where high-stakes tests still dominate.

On a practical level, this study presents two contributions to DKU and other universities. On one side, DKU could use the results to further examine its components that cultivate students' noncognitive skills development and address the unsuccessful elements. On the other side, this study could serve as a guide on how to build a college environment that optimally fosters students' noncognitive skills. An urgency of noncognitive skills development is also called for consideration of its vital significance in one's life.

Limitations

Qualitative research is often criticized for its small number of participants, which affects its generalizability and reliability (Creswell, 2013). However, the purpose of this research is to find, not to generalize. This research is subjected to a small number of participants, only 5 Chinese students of Class 2024 at DKU were interviewed. The researcher also acknowledged that if participants were replaced with different individuals, the findings might be changed as well. Also, Class 2024 is the cohort that was the most heavily affected by COVID-19. If the participants in this research were changed into other class cohorts, the findings might be different. The researcher thinks that insights gained from "a narrow population of people do not provide definitive answers applicable to all people and institutions" (Dulany, 2020, p. 6).

Due to the fact that interviews were carried out in a language other than English (Chinese), the translation unavoidably lost some authenticity and originality that this process

usually incurs. Furthermore, being a novel researcher, the researcher's inchoate experience in handling the research might impede the best completion of this research.

Also, this case study settles its research boundary at DKU, a small residential liberal arts university belonging to Sino Joint Venture Universities in China. It is single-case evidence, any findings or results from this research do not indicate similar findings in other universities.

Delimitations

First of all, this study does not imply that the researcher undermines the importance of cognitive skills, but rather it is a study that points out the significance of the study of noncognitive skills. It is worth mentioning that noncognitive skills and cognitive skills cannot be cleanly separated or intertwined (Kell, 2018). Therefore, this research does not decrease the importance of cognitive skills.

Secondly, DKU is a university that accommodates international students and graduate students, and their well-being and social development are certainly pivotal in DKU's whole community. Nonetheless, they are not the focus of this study.

Definitions of Terms

Noncognitive Skills: refer to a set of behaviors, attitudes, and skills that are believed to underpin success in education, the workplace, and life in general (Borghans et al., 2008; Heckman & Rubinstein, 2001; Frank, 2020). In this research, the expression of noncognitive skills is used, which does not mean other expressions like non-cognitive skills, NCS, etc. are not correct as many scholars might use them as well.

Liberal Arts Education: interchangeable with liberal education, and liberal arts and sciences education. Nussbaum (1997) referred to liberal education as the cultivation of citizenship by drawing upon Socrates' concept of " the examined life" and it liberates the mind from the bondage of habit and custom, thus producing global citizens.

Sino Joint Venture University: is a new university with legal person status under Chinese law established through partnerships between Chinese and international universities. Sino Joint Venture Universities were required by China's Ministry of Education to have a formal partnership between a Chinese and a foreign university to ensure its sovereignty (Hayhoe & Pan, 2015). Sino Joint Venture Universities are registered as legal Chinese entities and the chancellor must be a Chinese national.

DKU: short for Duke Kunshan University, is the site for this research. It is a highly selective research-oriented, liberal arts university, whose primary mission is to enable students from around the world to lead purposeful and productive lives (Duke Kunshan University, n.d.)

Situated Learning Theory: is a social learning theory elaborated on by Lave and Wenger (1991) addressing learning in social contexts. This theory examines what social engagements can provide the proper context for learning to take place (Hanks, 1991). As the theoretical framework of this study, situated learning theory guides this research.

CoPs: short for Communities of Practices, a sub-concept of Situated Learning Theory. A community of practice is "a set of relations among persons, activities, and the world over time and in relation with other tangential and overlapping communities of practice" (Lave & Wenger, 1991, p. 98).

Gaokao: (college entrance examination), is the most demanding and critical high-stakes test in China. "The senior high schools were quite directly preparing students for colleges and

universities by simply teaching them how to get high scores in various exams but ignored the development of students as the whole person in moral, intellectual, physical, aesthetic, and personality" (Pang et al., 2020, p. 38).

Organization of the Study

Chapter 1 provides the introduction, problem statement, purpose of research, research questions, methodology, theoretical framework, potential significance of study, limitations and delimitations, and definition of terms.

Chapter 2 combs through previous literature, addressing research topics including noncognitive skills, liberal arts education, Sino Joint Venture Universities, DKU, and the theoretical framework of Situated Learning Theory, providing a rationale for this theoretical framework at DKU, also, the innovation of research to meet gap is proposed and highlighted.

Chapter 3 introduces the qualitative research methodology with case research design including the research site and participants; emphasis is given to the data collection, data analysis, ethical consideration, and trustworthiness.

Chapter 4 deals with the research findings and presents the findings by research questions.

Chapter 5 discusses the findings, connects with previous literature and the theoretical framework, and produces conclusions, the implication of this research, and potential research directions.

Chapter 2 - Literature Review

This research aims to explore Chinese students' noncognitive skills development at Sino Joint Venture Universities through a case study of DKU. This chapter reviews literature associated with the major topics such as Noncognitive Skills, Liberal Arts Education, Sino Joint Venture Universities, and DKU, and then, the theoretical framework of Situated Learning Theory is introduced and the rationale for its implication at DKU is provided. A map of how to address the research gap is provided as well in the final section.

Noncognitive Skills

Definitions of Noncognitive Skills

A big challenge exists in how to define noncognitive skills. Although researchers agree that noncognitive skills refer to a set of behaviors, attitudes, and skills that are believed to underpin success in education, the workplace, and life in general (Borghans et al., 2008; Heckman & Rubinstein, 2001; Frank, 2020), this explanation does not disperse the vagueness of this concept. As the origin of the term noncognitive skills was used to differentiate the factors measured by tests of cognitive and academic achievement (Frank, 2020), such a setting resulted in a loose structure in its definition. Noncognitive skills are subjective to the disposable interpretation by researchers and audiences. It is salient that while cognitive skills equate intelligence, noncognitive skills look like a basket holding the things that cognitive skills do not label. Kell (2018) directly pointed out that "noncognitive skills are whatever cognitive skills are not" (p. 25), and claimed that the term "noncognitive" was problematic. Kankaras (2017) asserted that the term was too broad to be helpful.

Throughout the literature review, the researcher found that many other terms have almost the same content that noncognitive skills contain; these are social and emotional skills, 21st-century skills, character skills, life skills, soft skills, personal traits, etc. (Sánchez Puerta et al., 2016; Schoon et al., 2013). Noncognitive skills have diverse interpretations in various kinds of literature (Lipnevich &Roberts, 2012). However, Kautz et al. (2014) pointed out that "traits" should not be used to describe noncognitive skills as the traits are fixed at conception and cannot be easily changed. The complication and contested features add difficulty to understanding and implying the concept rigorously.

The Cultivation of Noncognitive Skills

Abundant studies suggested that class size, teachers, and education system are all critical to the improvement of noncognitive skills. Dee and West (2011) used a quasi-experimental analysis of nationally representative data on eighth graders in the U.S. to find out that class size reduction could improve noncognitive skills. Positive teacher-student relationships are beneficial for students' noncognitive skills development (Blazar & Kraft, 2017; Cheng, 2016; Hagenauer & Volet, 2014). When using Sedlacek's questionnaire of noncognitive variables, Shorette et al. (2015) found that the supportive ethos of historically black colleges and universities improved participants' self-concept and self-efficacy, two areas of noncognitive skills. Kassenboehmer et al. (2018) found there was a positive relationship between university education, and extraversion and agreeableness. During their research, four variables such as curriculum, teaching styles, peer groups, and extracurricular activities were hypothesized to have a relationship with noncognitive skills. In the findings, Kassenboehmer et al. (2018) revealed that continuous engagement in club activities, social functions, and communication with fellow students and academic staff can lead

to the development of students' noncognitive skills. These findings shed the light on effectiveness that higher education can have on students' noncognitive skills development.

Noncognitive skills are effectively built during early childhood and young elementary school and they are more malleable than cognitive skills during the adolescent years (Kautz et al., 2014). Hoeschler et al. (2018) employed a longitudinal data set to find out that grit and three of the big five personality traits (conscientiousness, agreeableness, and emotional stability) were substantially improved between the ages of 15 and 22. As most research on student noncognitive development has been conducted at the elementary and secondary school levels (Alvarez-Huerta et al., 2022), there is little evidence that the higher education level can impact the development of noncognitive skills. Although Kassenboehmer et al. (2018) unearthed that a university education could build noncognitive skills as well which enunciates university period is still a suitable time for the development of noncognitive skills, the relevant research is still scant at the higher education level.

Difficulty of Measuring Noncognitive Skills

To measure the noncognitive skills, it is vital to understand what the skillsets encompass. Previous research presents diversity. One scientific report identifies the most critical skills for the 21st century: communication, relationships and collaboration, critical thinking and decision-making, and initiative and self-direction (Quieng et al., 2015). The Partnership for 21st Century Skills, for example, puts critical thinking, communication, collaboration, and creativity as parameters to indicate academic achievement (Lipnevich et al., 2016), these skills are commonly referred to as noncognitive skills. Furthermore, researchers broke noncognitive

factors into several sub-categories: attitude and beliefs; social and emotional qualities; learning processes, and personal traits (Lipnevich & Roberts, 2012).

The broad content of noncognitive skills offers variable models to approach them. For instance, researchers used Sedlacek's (2004) conceptual model in their study of noncognitive skills for Black males which incorporates: self-concept, self-appraisal, racism, leadership, etc. (Shorette & Palmer, 2015). The "Big Five Model" is most commonly referred to assess the noncognitive skills of individuals (Cabus et al., 2021). It includes five personality traits 1) Openness to Experience (the tendency to be open to new aesthetic, cultural, or intellectual experiences), 2) Conscientiousness (the tendency to be organized, responsible and hardworking), 3) Extraversion (an orientation of one's interests and energies toward the outer world of people and things rather than the inner world of subjective experience), 4) Agreeableness (the tendency to act in a cooperative, unselfish manner), and 5) Neuroticism (also called emotional stability, predictability and consistency in emotional reactions with an absence of rapid mood changes; neuroticism is a chronic level of emotional instability and proneness to psychological distress). With the meta-analysis, Cabus et al. (2021) claimed that the "Big Five Model" had the highest amount of accumulated empirical evidence compared to other models of human personality differences. Other authors have leveraged the combination of "Big Five Model" personality traits and other types of noncognitive skills: grit (i.e., perseverance and passion for long-term goals) in their research (Hoeschler et al., 2018).

Scholars have addressed that cognitive and noncognitive skills develop in interaction with each other, addressing the fact that noncognitive skills could influence cognitive performance. Therefore, it isn't easy to distinguish the two skills in real research. Because of the significance of noncognitive skills, researchers have made attempts to examine factors that affect

the cultivation of noncognitive skills. Due to these characteristics, noncognitive skills encompass difficulty in categorization and measurement (Duckwork & Yeager, 2015). Due to the vague nature of noncognitive skills, it was a challenge for the researcher of this study to find a fit parameter to frame noncognitive skills at DKU. More information is provided in the remaining sections to address this problem.

Liberal Arts Education

Roots of Liberal Arts Education

To begin with liberal arts education, it is important to clarify the concepts between "liberal arts" and "liberal education". As van der Wende (2011) pointed out, liberal arts or liberal education is the shorthand for the comprehensive term liberal arts and science education as science is commonly integrated into this concept. Cheng & Wei (2021) stated that liberal arts can trace its roots to the ancient Greek model of education. Kirby and van der Wende (2016) assumed that liberal education liberates "the individual by offering opportunities for foundational knowledge, reflection and analysis, artistic creativity, and an appreciation for the precision of scientific concepts and experiments" (p. 4). Nussbaum (1997) referred to liberal education as the cultivation of citizenship by drawing on Socrates' concept of "the examined life" and it liberates the mind from the bondage of habit and custom, producing global citizens. This education is boiled down to the cultivation of humanity (Nussbaum, 1997, p. 8).

According to the American Association of Colleges and Universities' definition, liberal education means the best approach to the democratic end and fulfills the promise of social mobility - it frees the mind. On their official website, three goals are defined for liberal arts education. The first is that it develops students' intellectual and practical skills, critical and

creative thinking, written and oral communication, teamwork and problem-solving, quantitative, information, scientific, and technological literacies. The second is to cultivate students' personal and social responsibility. The third goal is to promote students' integrative learning, in which students can apply knowledge and skills to complex problems and in varied settings.

The definition of liberal arts education is changing alongside its development. Nussbaum (1997) critically addressed that current liberal arts education is discrepant with the older one as the new idea is to "produce free citizens, who are free not because of wealth or birth, but because they can call their minds their own" (p. 310). She emphasized that "male and female, slave-born and freeborn, rich and poor, they have ownership of their own thought and speech, and this imparts to them a dignity that is far beyond the outer dignity of class and rank" (p. 310). Becker (2022) addressed that liberal arts education can provide "a space for students to learn and find a voice in authoritarian or semiclosed societies" (p. 297). The core idea of liberal arts education is the engaged citizen model that is valuable and perspicuous in the current knowledge economy.

Significance of Liberal Arts Education

Logan and Curry (2015) voiced the adaptability of liberal arts education addressing "the history of liberal education in America provides ample evidence of this adaptability, birthed as it was from European antecedents into a heavily Protestant milieu, dented by the Revolution and subsequent wars, prodded by German research ideals, molded by pragmatism and progressivism, and always subject to the demands and general spirit of the American public" (Logan & Curry, 2015, p. 3). Baker and Balwin (2014) drew upon the evolutionary model of change to examine the organizational transformation of three liberal arts colleges (Albion College, Allegheny College, and Kenyon College) to understand why and how these colleges change. It is

meaningful for audiences to acknowledge that liberal arts education is a concept of adaptability accommodating to the new development and environment surrounding it.

One concern raised by Godwin and Altbach (2016) is that "vocationalism and specialization have become the dominant element in much of the world" (p. 6). A globalized economy with rapidly increasing knowledge-based careers requires more flexible, globally competent, and critical labor forces in both developed and developing regions (Godwin & Altbach, 2016, p. 6). In introducing Yale-NUS College in Singapore, Lewis (2018) pointed out that liberal arts education plays an increasingly important role in developing students' cognitive flexibility and life-long learning ability acknowledging that "the ability to learn new skills, accept new approaches, and cope with continual social change will be essential in the fourth industrial revolution" (Lewis, 2018, p. 15). Dorman and Brown (2018) argued that liberal arts preparation can provide the skills and preparation many employers look for in today's employees. It boils down that "liberal arts education not only prepares students with the right type of skills to meet the challenges of the 21st century but also does so in a cost-effective way" (Cheng & Wei, 2021, p. 3).

Specifically, Cech (1999) summarized how liberal arts colleges are remarkably successful in training eventual Ph.D., attributed to the unique advantages of this education such as small classes, independent research, and undergraduate education-centered faculty that are available to the students, as well as the incorporation of courses in the humanities and arts. Bourne and Grawe (2015) revealed that accessibility of the curriculum, intense faculty supervision of student-driven research, in-depth advising, and careful programming make Carleton College successful in producing Ph.D. Via the employment of a survey at a small southern liberal arts university in the U.S., Cover (1996) obtained that the most significant

finding is that "both male and female graduates overwhelmingly felt the goals of a liberal arts education were important and by implication relevant to modern society" (p. 13).

Using data from the first phase of the Wabash National Study of Liberal Arts Education, where a range of student background characteristics and institutions attended, Seifert et al. (2008) concluded that liberal arts experiences have a positive effect on four of six liberal arts outcomes, including intercultural effectiveness, inclination to inquire and lifelong learning, well-being, and leadership. Cameron et al. (2018) presented and analyzed the perspectives about the career development of 1901 graduates of 14 different International Development Studies programs in Canada based on a survey conducted in 2016, its findings express the top skills that graduates identify as very important for finding a job were communications skills, interpersonal and cross-cultural skills, second language proficiency, qualitative and quantitative research skills, most of which lie at the heart of traditional liberal arts curricula. The survey results also clarify that many graduates recognize the value of a degree that shapes their worldview and helps them develop broadly transferable soft skills even if it does not lead to specific professional jobs.

Global Trend of Liberal Arts Education

As the significance of liberal arts education is valued, it has been spread out globally. Van de Wende (2011) analyzed why liberal arts and science education seems to be a relevant response to the need for higher education reform in Europe as it could prepare college graduates for the complex realities of this new global world, in which Europe wants to play a role as a leading knowledge economy. Mino (2021) argued that "Indian liberal arts universities have created an empowering educational experience for students to explore multiple disciplines, develop a greater appreciation of the Indian context, and unlock their potential through

supportive relationships with others" (p. 135). Cheng and Wei (2021) introduced a great deal of information about liberal arts education and liberal arts education, and their research proves that liberal arts education could improve students' overall skills, seeing the need for this education in China. Also, plenty of liberal arts programs are initiated in other East Asian regions such as Singapore, Japan, Korea, Russia, etc. showing the prosperity of this education model.

Yang (2016) pointed out that "East Asia's imported Western liberal arts college model has centered mostly on the material level rather than the social level which is the core of the Western model although this has never been comprehended" (p. 31). The research advocated that liberal spirit rather than the content was taken on board. "The role of an individual is crucially important in the U.S. liberal arts education, is totally in conflict with the collectivist cultural value embedded throughout East Asia where every person is part of a family and a community, not the autonomous entity that is highly valued in western tradition" (Yang, 2016, p. 33). Lewis (2018) stressed that Asian educators see that while their students have excelled in cognitive tests, their universities fail to encourage innovation and lack opportunities in some of the American higher education systems. Becker (2014) reiterated that Asian countries should ensure students are exposed to a number of perspectives that are not favored in some countries. Cheng (2017) argued that "both the liberal arts and Confucian traditions in China could enable individuals to see themselves in the larger social context and connect their life courses with the whole of humankind. Therefore, they share the common goal of educating individuals to lead a meaningful and fulfilling life where one pursues causes larger than themselves and establishes profound connections with nature and mankind" (Cheng, 2017, p. 467).

A more prevalent phenomenon in China is that students are expected to engage in a study program that results in lucrative employment after graduation and favors majors in science,

finance, and engineering. These pressures are bred in a culture of competition instilled in students from a young age and amplified by a secondary education system focused on exam preparation (Cheng & Wei, 2021). "Careerism has become the major demand for higher education, educational reform - particularly the revival of liberal arts education in some elite universities-will hopefully, help to educate more students with critical thinking, creativity, innovative skills, and balanced development" (Jiang, 2013, p. 14). As posed by Mitchell and Seiler (2015), the instrumentalist defense of liberal arts education is that this education "sustains and advantages graduates as they navigate the job markets" (p. 11). Furthermore, another disadvantage of higher education in China is the overemphasis on the high-stakes testing. Jiang (2013) spoke out that "colleges and universities overemphasize rote memorization, a top-down instruction style, and a near-total reliance on exams to evaluate progress" (p. 22). In his study, he examined the context, contents, and implications of liberal arts education in three traditional Chinese universities: Fudan, Shanghai, and ECNU in Shanghai. Four themes emerged, such as cultivating a broadly informed intellect, critical thinking, creativity, moral reasoning, and spirituality through a liberal arts education (Jiang, 2013).

Sino Joint Venture Universities: DKU in Particular

Sino Joint Venture Universities

Sino Joint Venture Universities are mentioned as both international branch campuses (Norman et al., 2023), and as Sino-Foreign Cooperative Universities (Wu et al., 2022), etc. In this study, the researcher uses the concept of Sino Joint Venture Universities. Simon (2022), the previous vice chancellor of DKU, described this sort of university as a registered Chinese entity under the oversight of the Ministry of Education but it is managed by the local education

department. Hayhoe and Pan (2015) summarized that these universities are required by China's Ministry of Education to have a formal partnership between a Chinese and a foreign university to ensure its sovereignty, Sino Joint Venture Universities are registered as a legal Chinese entity and the chancellor must be a Chinese national. This definition distinguishes Sino Joint Venture Universities from other Sino joint venture programs in China. Globalization is the main power that drives the establishment of Sino Joint Venture Universities and these universities in China belong to the minority, currently, there are only ten universities that fit into this category - four with the US, two with the UK, one with Russia, one with Israel, and the rest with Hong Kong. These ten comprehensive joint venture universities are unique because they issue two degrees, a foreign degree, and a local Chinese degree (Simon, 2022). The earliest joint venture university in China is the University of Nottingham-Ningbo established in 2004 as seen in Table 2.1 below.

Table 2.1. List of Sino Joint Venture Universities

NO.	University	Year of Est.	Foreign Partner	Chinese Partner
1	UNNC	2004	University of Nottingham	Zhejiang Wanli University
2	BNU-HKBU	2005	Hong Kong Baptist University	Beijing Normal University
3	XJTLU	2006	University of Liverpool	Xi'an Jiaotong University
4	NYU Shanghai	2011	New York University	East China Normal University
5	WKU	2011	Kean University	Wenzhou University
6	DKU	2013	Duke University	Wuhan University
7	CUHK Shenzhen	2014	Chinese University of Hong Kong	Shenzhen University
8	GTIIT	2016	Technion Israel Institute of Technology	Shantou University
9	MSU BIT	2017	M.V. Lomonosov Moscow State University	Beijing Institute of Technology
10	HKUST(Guangzhou)	2022	The Hong Kong University of Science and Technology	Guangzhou University

The popularity of Sino Joint Venture Universities is mainly driven by the substantial advantages that this education could bring to students. Wu et al. (2022) drew the annual employment quality reports by six Sino Joint Venture Universities to see whether graduates had distinct advantages regarding further study and employment and found that the overall employment rate reached 95.84% (Wu et al., 2022). Wu et al. (2022) attributed these advantages to graduates from Sino Joint Venture Universities with respect to learning capabilities, professional knowledge, English proficiency, international experience, and family support (Wu et al., 2022, p. 39). Such findings were echoed at DKU; according to Duke Kunshan University's 2022 Undergraduate Career Report, the employment rate for Chinese students reached 98.8% (Duke Kunshan University, n.d.); according to Duke Kunshan University's 2023 Undergraduate Career Report, the employment rate for Chinese students reached 97.3% (Duke Kunshan University, n.d.). At large, this education exposes students to an immersive English learning environment, close student-teacher relationships, innovative curriculum, small classes, abundant resources in research and activities, global exchange opportunities, and more.

DKU in Particular

As stated on this website, DKU is a "highly selective research-oriented, liberal arts and sciences university, whose primary mission is to enable students from around the world to lead purposeful and productive lives" (Duke Kunshan University, n.d.). Kirby (2014) stressed that "Duke Kunshan University is without question the most ambitious international educational enterprise in China since the days of Yenching University (Peking University)" (p. 151). DKU is planned not simply as an ordinary university but as a premier Sino Joint Venture University. In terms of DKU, there are three key players involved in the DKU joint venture: Duke University, Wuhan University, and the city of Kunshan, in the Jiangsu Province. Wuhan University, as a

leading university in China, is the main channel of communication with China's government and appoints chancellors for DKU. As a third partner, the city of Kunshan offers the land and campus construction and provides certain financial support.

The core of DKU is to "offer a four-year undergraduate degree program featuring an integrated and multi-disciplinary curriculum, with an effective blend of Chinese, American, and global techniques and values and a culture of academic excellence and freedom" (Duke Kunshan University, n.d.). Scholar Olson (2016) pointed out that "DKU's undergraduate liberal arts curriculum integrated Eastern and Western thinking and traditions in liberal arts education to create a final product that is unique and truly innovative" (p. 68). Mayhoe and Pan (2015) expressed that a Duke committee designed this program by synthesizing Duke's unique characteristics as a liberal arts research university. Simon (2022) reinforced that "the DKU curriculum was constructed primarily on the Duke campus in Durham to reflect the newest thinking about liberal arts education" (p. 77). Liu (2018), the previous Chancellor of DKU and academician of the Chinese Academy of Engineering, when he was interviewed, expressed that "DKU will position itself as a small-scale, elite, comprehensive, research-led, and international top-notch talent cultivation model".

Scholars addressed DKU's innovative practices. For instance, Professor Gao, the previous vice chancellor at DKU and also a prominent female scientist at Duke University, stressed it as a service-learning university underlining four features of Duke Kunshan University: 1) International platform, multicultural integration; 2) Student-centered, question-based, based on foreseeable trends; 3) Break the boundaries of traditional disciplines, highly interdisciplinary; 4) Collaborative, vertically integrated research & education. Pickus (2023), who is director of the Institute for Global Higher Education at Duke Kunshan University addressed that DKU's

education possessed the characteristics: global care, interdisciplinary, skill-based learning, experiential learning, active learning, and flexible systems.

Theoretical Framework: Situated Learning Theory

Situated Learning Theory works as the theoretical framework for this research. Situated Learning Theory was elaborated on by Lave and Wenger in 1991 after they interrogated the traditional apprenticeship model, which creatively dealt with learning as "an integral and inseparable aspect of social practice" (p. 31). Hanks (1991) applauded that "situated learning contributed to the research that explores the situated character of human understanding and communication" (p. 14). "Rather than asking what kinds of cognitive processes and conceptual structures are involved, they ask what kinds of social engagements provide the proper context for learning to take place" (Hanks, 1991, p. 14). Lave and Wenger (1991) regarded "legitimate peripheral participation" as the core of defining learning as situated activities and this concept "is proposed as a descriptor of engagement in social practice that entails learning as an integral constituent" (p. 35). Legitimate peripheral participation provides access to a nexus of relations, explores relations, and derives from the richness of its interconnections. To better enunciate the relations through addressing contexts, Lave and Wenger (1991) coined the terminology Communities of Practice and defined a community of practice as "a set of relations among persons, activities, and the world over time and in relation with other tangential and overlapping communities of practice" (p. 98). In the interview conducted by Omidvar and Kislov (2014), Wenger stressed that "Communities of practice tend to view learning as a process unfolding at the interface between individuals and social structures" (p. 9).

Communities of Practices (CoPs) as a theory framework kept evolving, and in 1998, Wenger further defined the CoPs as a group that coheres through mutual engagement, joint enterprise , and shared repertoire (Annala & Makinen, 2017; Cox, 2015; Sterret et al., 2015). In the late publication, the aforementioned mutual engagement, joint enterprise, and shared repertoire were refined as community, domain, and practice (Bertram et al., 2017; Wenger, 2015). In the latest book *Learning in Landscape of Practice*, the concept of CoPs evolved into a new concept. Knowledgeability was brought in to address not exclusively one community, but also the multiple communities in which one could situate (Wenger-Trayner &Wenger-Trayner, 2014). The instrumentality of CoPs is increasingly evident in its application and implementation.

Table 2.2. Situated Learning Theory Model

Setting	Communities of Practice
Purpose	Development from New Comers to Experts
Mechanism	Engagements of Legitimate Peripheral Participation
Drive	Relationships with People, Artifacts, Activities, and Contexts
Context	Authentic Environment

The Rationale for Situated Learning Theory

Situated learning theory regards learning as a dimension of social practice, which continues the genes of previous scholars in addressing social learning. Dewey's philosophy of learning through experience emphasizes the critical role of active engagement, reflection, and the social context in the educational process (Dewey, 1938). Bandura's (1977) social learning theory emphasizes the role of observation, imitation, and modeling in learning behaviors, suggesting that noncognitive skills are acquired through social interactions and experiences. Vygotsky's (1978) sociocultural theory also highlights the importance of social engagement and cultural

contexts in learning processes, including the development of noncognitive skills. Situated learning theory matches my epistemological view of social constructivism.

Situated learning theory demonstrates vitality as this theory withstands critiques and interrogation from a plethora of scholars. CoPs have been effectively used in multiple vocational education areas such as healthcare, nursing, sport, etc. (Bertram et al., 2017; Berry, 2011; Sterret et al., 2015). In the higher education domain, the extant research explores the equity-minded approach among faculty through CoPs (Hakkola et al., 2021). CoPs are adopted to explore global service-learning in institutions of higher education (Lough & Toms, 2017). Also, the field of value creation is another exploration through CoPs in higher education (Dingyloudi et al., 2019). Scholar Conlon (2020) used a phenomenology approach to examine the Chinese students' experience at New York University Shanghai where CoPs were involved in examining the process that students learned to be experts within the community while engaging in a set of practices (Conlon, 2020, pp. 36-37). More pertinent to the DKU setting, Davies et al. (2020) mentioned the application of community of practice in their transformative learning design during the outbreak of COVID-19 at DKU addressing the collaboration deriving from a social structure increased faculty and students' confidence and self-efficacy. These studies contribute to the investigation and application of CoPs in plural fields and domains.

Although liberal arts education provides valuable guidance in higher education contexts, its inherently ambiguous and subjective nature can pose challenges. To explore a mechanism for cultivating noncognitive skills, the researcher of this study observed that situated learning theory offers a viable approach to describe the process of noncognitive skills development. This theory also aligns with the educational philosophy promoted by DKU. Meanwhile, situated learning theory was relevant to the concept of the whole person (Lave & Wenger, 1991). As DKU takes

no traditional instructional teaching, boundaries, and hierarchic structure, Lave and Wenger's (1991) consideration of rethinking schooling in situated learning is particularly relevant in this research. Situated learning theory is the right theory that fits well to study learning under social and cultural contexts (Sterret et al., 2015).

Nonetheless, in some research, CoPs have been found to present ambiguity in their use and meaning (Buckley et al., 2019; Cox, 2005). Due to the loose structure, CoPs are criticized for the multiplicity of interpretations of theory (Annala & Makinen, 2017), which each researcher could interpret via their own understanding. When using situated learning theory, researchers should be cautious in their research design. In the next section, the researcher of this study connects noncognitive skills, liberal arts education, and situated learning theory with DKU to make a rigorous conceptualized model for guiding this research.

Research Gap to Bridge

Through a small-scale previous investigation, the researcher found that noncognitive skills are not familiar terms to DKU's students, therefore, it was unacclimatized to directly employ noncognitive skills models such as the "Big Five Model" for this research. To explore an optimal parameter in mapping out and assessing noncognitive skills, the researcher further examined thoroughly DKU's website. In the "Welcome to Duke Kunshan University", the four-year bachelor’s program emphasizes the cultivation of students' critical thinking, creativity, collaboration, and self-exploration (Duke Kunshan University, n.d.), revealing these four noncognitive skills are highlighted at DKU. In the "Mission Statement" section, terms oriented with noncognitive skills are: "leading purposeful and productive lives, innovative, cross-cultural understanding, creative, and free inquiry" (Duke Kunshan University, n.d.).

Furthermore, seven animating principles advocated by DKU are expressed as 1) rooted globalism, 2) collaborative problem-solving, 3) research and practice, 4) lucid communication, 5) independence and creativity, 6) wise leadership, 7) a purposeful life (Duke Kunshan University, n. d.). Since a plethora of skills overlap with each other, to facilitate this research, the seven animating principles are leveraged as suitable parameters. Additionally, these principles are widely advocated in a variety of publicity materials such as posters in DKU's AB lobby, recruitment materials, etc., and such recognition is helpful as participants have a high possibility of recognizing them reducing complexities and controversy. These noncognitive skills serve as indicators of understanding DKU's education purpose as well as the parameters for this research.

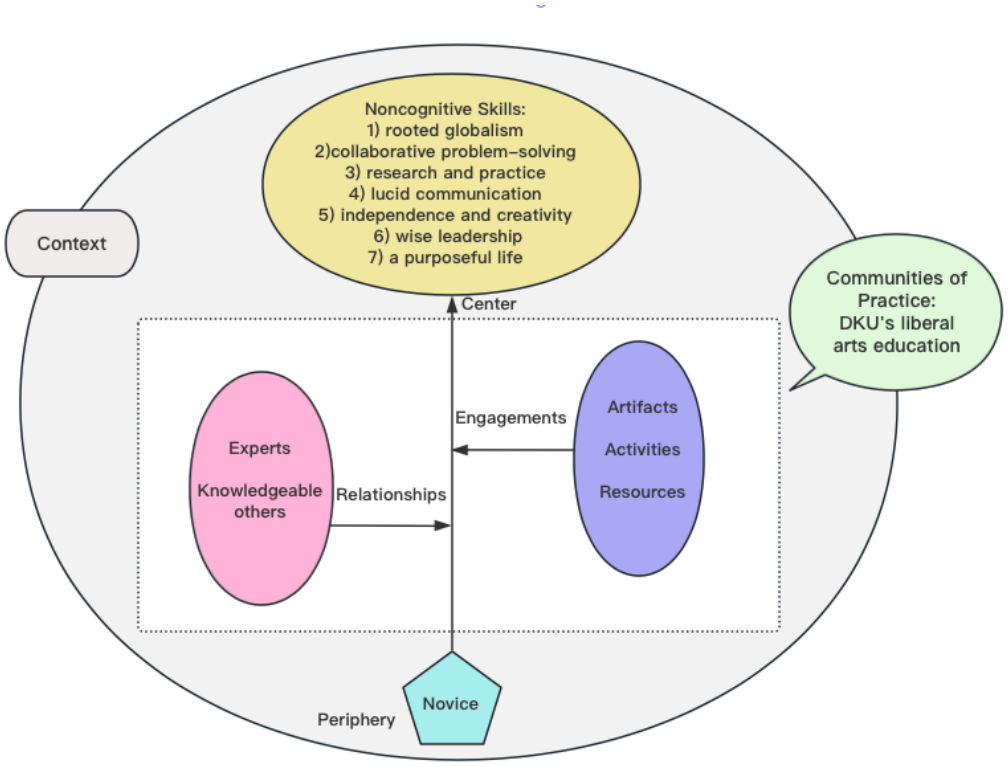
Table 2.3. Seven Animating Principles

Rooted Globalism	"To cultivate informed and engaged citizens who are knowledgeable about each other's histories, traditions of thought and affiliations; and skilled in navigating among local, national and global identities and commitments."
Collaborative Problem-Solving	"To instill the habits of collaboration and the ability to synthesize disparate insights in solving complex challenges."
Research and Practice	"To enhance the ability to forge links between theory and practice in the many-sided and rapidly changing world of human need."
Lucid Communication	"To develop the ability to communicate effectively, both orally and in writing, and to listen attentively to different viewpoints in coming to mature judgments."
Independence and Creativity	"To nurture free inquiry, deep reflection and a drive to ask interesting questions and find compelling answers."
Wise Leadership	"To shape thinkers and doers who possess the moral compass to guide communities and institutions toward a common good and who have the wisdom and technical competence to deal effectively with complexity."
A Purposeful Life	"To form reflective scholars who test their core beliefs, connect their course of study to big questions of meaning, and who build the capacity for lifelong learning and exploration."

Note: these seven animating principles are directly quoted from DKU (Duke Kunshan University, n.d.)

A further innovation in this research is to integrate the situated learning theory, liberal arts education, and noncognitive skills of seven animated principles. Mina-Herrera(n.d.) is helpful in constructing a model of situated learning theory in which she values the context and environment for the occurrence of the situated aspect of learning. Inspired by her work, the researcher summarized the components of the Situated Learning Theory in DKU's context.

Figure 2.1. Situated Learning Theory in DKU's Context



Chapter Summary

This chapter provides a comprehensive literature review on the key terms central to this research: Noncognitive Skills, Liberal Arts Education, and Sino Joint Venture Universities (with a specific focus on DKU). The theoretical framework of Situated Learning Theory is introduced

and examined and its relevance to this research is explained. The chapter also introduces and highlights seven animating principles established by DKU for assessing noncognitive skills and outlines the situated learning theory in the context of DKU.

The subsequent chapter explains the methodology employed by the researcher.

Chapter 3 - Methodology

This research aims to investigate the Chinese students' noncognitive skills development at Sino Joint Venture Universities with a case study of DKU. A qualitative case research method is employed. Merriam (1998) articulated that "qualitative research is an umbrella concept covering several forms of inquiry that help us understand and explain the meaning of social phenomena with as little disruption of the natural setting as possible" (p. 28). Creswell (2013) stressed that qualitative research could be employed to explore a detailed understanding of the issue.

Purpose of the Research

This research aims to understand Chinese students' noncognitive skills development at Sino Joint Venture Universities, with a case study of DKU which offers liberal arts education in China. Rich empirical evidence (i.e. career placement reports, student self-reports, feedback from employers) shows that Chinese students' holistic performance has been substantially improved at DKU, which signifies the correlation between DKU's education and Chinese students' noncognitive skills development. Through this qualitative research, the researcher examines how DKU's education fosters Chinese students' noncognitive skills development. Based on previous research, noncognitive skills are found to be loosely structured and subjectively defined, this research takes advantage of the noncognitive skills model of seven animating principles missioned by DKU as the research framework.

The significance of this research lies in multiple folds. First, this research can engender insights into DKU education from the perspective of its Chinese students, which could add to the insufficient research on noncognitive skills development towards disadvantaged groups. Chinese students, subjected to their education journey, generally believe that they do not experience

sound education in noncognitive skills development. Second, this research can explore a mechanism for cultivating noncognitive skills development during the college period. Third, this study could produce real-world lessons in university administration and development, typically for DKU and other different sorts of universities. For instance, DKU can execute correspondent measures to reinforce positive practices and eradicate negative ones.

Last but not least, this research can generate insights into cross-national education and policymaking. Significantly, the exploration of DKU's education model sheds light on the Sino Joint Venture Universities, assisting audiences in understanding the novel education straddling Eastern and Western education. Such findings provide a sample for other international and global education initiatives in other countries.

Research Questions

This research is purported to investigate the Chinese students' noncognitive skills development at Sino Joint Venture Universities through a case study of DKU. Three main questions effectively guide this research and are presented in the following.

1. Which specific noncognitive skills have Chinese students identified as being significantly improved during their study at DKU?

2. How do Chinese students perceive the impact of improved noncognitive skills on their overall personal development and well-being?

3. How does DKU facilitate Chinese students' noncognitive skills development? This is the overarching question for this research.

The first and second questions aim to find out what and the third question targets getting insight into how.

Rationale for Case Study

As the research topic is to examine Chinese students' noncognitive skills development, qualitative research works best for this research which could cover an in-depth understanding of personal experience (Creswell, 2013). Merriam (1998) said that "qualitative research is an umbrella concept covering several forms of inquiry that help us understand and explain the meaning of social phenomena with as little disruption of the natural setting as possible" (p. 28). Creswell (2013) stressed that qualitative research could be employed to explore a detailed understanding of the issue. In this study, the researcher takes advantage of the case study approach to capture the rich detailed information about participants' experiences at DKU. A case study approach is used here since the case is a certain phenomenon occurring in a bounded context (Merriam, 1998). A case study "presents an in-depth examination of a particular case" (Lichtman, 2012, p. 90) and this research focuses within the scope of DKU.

However, the case study methodology does not have well-defined and well-structured protocols (Yin, 2002, also cited Yan, 2015). Yan compared three seminal scholars in this area of case study: Yin, Merriam, and Stake (2015). As the researcher's epistemology is social constructivism, he does not espouse Yin's positivistic learning (Yan, 2015). After the researcher read through Stake's *The Art of Case Study Research*, he found Stake's explanation helped little for him to conduct a case study since his method relied heavily on the researchers' expertise. Merriam (1998) helpfully guided the researcher to design case study research as Merriam "presents very informative and clear guidelines and advice regarding the review of relevant literature," and "the process of designing qualitative research in a rather detailed fashion" (Yan, 2015, p. 141). In this case study in education, the principal guideline came from Merriam (1998).

Significantly, the case study design and method scaffold the researcher to encompass multiple types of data. The next section describes why DKU was selected as the study setting.

Research Site

This research concerns the group of Chinese students at DKU, a small-sized residential liberal arts college in China. As one of ten Sino joint venture universities, DKU is similar to them in English education, innovative teaching, global exchange, etc. In this study, the researcher emphasizes the description of Chinese students at DKU. Founded in 2012, DKU started its graduate education in 2014 with three graduate programs, then after four years of preparation, DKU kicked off its first undergraduate education in 2018. As undergraduate education is the focus of this research, the researcher briefly introduces DKU's general situation. DKU admits a relatively small number of undergraduates each year, commencing with only 170 Chinese students in 2018 and growing to 240 Chinese students in 2022. Meanwhile, DKU admits around one-third of its international students per year to create an international environment.

Chinese students at DKU experience a complicated admission process. As this admission model is too complex to narrate, the researcher here is to simplify this process. According to the admission outline by DKU China Enrollment Management Office, Chinese students who hope to be admitted to DKU must experience three phases. The first is to submit their application to DKU, which encompasses materials like high school transcripts, activities, honors certificates, essays, recommendation letter (directly sent by recommender), etc. The students who successfully pass this round of review are invited to join Campus Day events mainly for interviews and writing tests for the second round of evaluation. The shortlist is announced after these two rounds of evaluation to inform students if they meet the prerequisites for admission to

DKU. The final component of this evaluation model is Gaokao's scores, which is configured to account for 50%. According to the previous admission statistics, only students scoring extraordinarily high scores could be finally admitted to DKU. As the unique context engaged by the China Education Bureau, DKU's admission model underscores the high-stakes tests as students should pass Gaokao and achieve top-tier scores.

DKU is selected as the research site for several considerations. The principal drive is to understand the mechanism of noncognitive skills development. DKU is a Western-styled residential liberal arts education university, which is believed to focus on the cultivation of students' holistic skills. The seven animating principles advocated by DKU are: rooted in globalism, collaborative problem solving, research and practice, lucid communication, independence and creativity, and wise leadership (Duke Kunshan University, n.d.) and these are in the spectrum of noncognitive skills. Students' performances at DKU are evidenced by its career placement reports. Therefore, studying Chinese students' noncognitive skills development can produce an in-depth understanding of this phenomenon in addition to the statistical career report. As a member of ten Sino Joint Venture Universities in China and administered by Duke University in the U.S., DKU has valuable meaning for international educational cooperation and can engender insights into the localization of liberal arts education in non-western contexts.

Another major consideration is the possible accomplishment of this research, DKU is the site to which the researcher has access. Prior to this study, the researcher accumulated a fundamental knowledge of DKU's students and DKU, which could be counted as a sort of prolonged engagement. As Rossman and Rallies (2017) addressed research must be doable within its desired setting, since the researcher took the role of being a recruiter for DKU for almost five years (from 2018-2022), he understands this site and has deep access to its Chinese

student groups. This experience could produce a prolonged engagement with the participants, which improves the credibility of the study (Houghton et al, 2013). Such experience engines the possibility of this research, allowing the researcher to delve into the essentials of DKU.

Participants

The researcher used the random purposeful sampling strategies to select participants, which means "the inquirer selects individuals and sites for study because they can purposefully inform an understanding of the research problem and central phenomenon in the study" (Cresswell & Poth, 2018, p. 224). In terms of how many participants should be recruited in the sample, Creswell and Poth (2018) suggested a limited number of participants in a case study as this number could amply identify the themes of the case. Merriam (1998) stressed that the number of sizes depends on the researcher's evaluation. The only criteria for this research are to find the year 4 students at DKU as it could best present their experiences at DKU.

In order to recruit them, this researcher designed a recruitment notice, which was reviewed by his advisor (**Appendix B**). He then contacted student C whom he knew; he had an impression of this student principally for her narration of one anecdote of how she became a member of the DKU Philharmonic Orchestra as she had no experience in musical instruments before in an Open House event. The researcher was impressed with her extraordinary story-telling ability. Upon my request, student C replied quickly saying that she was no longer a DKU student, yet she offered kind assistance as a gatekeeper to the researcher by circulating this notice among the current Year 4 groups. Immediately, students reached out to the researcher via WeChat (a principal communication tool in China) and the researcher added six students. Meanwhile, through the researcher's course project in Spring 2023, the researcher interviewed

student Ximo and invited student Ximo to be a participant again this time. In amount, seven students agreed to participate in this research. The original plan was to interview all of them, however, due to the schedule, time, and available resources, the researcher finished the interviews with 5 students: Ximo, Rachel, Alice, Yana, and Susan.

Considering the data saturation, the researcher sensed this sample size was reasonable. Also, this small scale was based on the Doable principle (Rossman and Rallis, 2017); it took an incredible time to transcribe the audio record for interviews, and meanwhile, as the interviews were conducted in Chinese, the researcher was obliged to translate some excerpts into English.

Data Collection

Case studies use different data collection methods to understand the case of interest (Creswell & Poth, 2018). Here in this research, three data collection methods are used to investigate the case of interest and to triangulate the data: semi-structured interviews, observation and field notes, and documents. These three data collection methods are the main ways that Merriam (1998) pointed out to collect data in the case study.

Semi-Structured Interviews

Seidman (2006) pointed out that "the root of the interview is an interest in understating the lived experience of other people and meaning they make of that experience" (p. 9). A semi-structured interview is a middle ground between a highly structured and unstructured interview, which permits interviewers to ask questions in relatively more flexible ways with the large part of the interview being guided by a list of questions. "This format allows the researcher to respond to the situation at hand, to the emerging worldview of the respondent, and new ideas on the topic" (Merriam, 1998, p. 92). The major data collection is to carry out face-to-face

interviews with each participant at the tearooms of the DKU campus. The researcher's positions with participants are equal as DKU is a flat system.

During the interview, the researcher utilized an interview protocol covering questions like: *Which specific non-cognitive skills have you personally identified as being significantly improved during your study at DKU? How do you perceive the impact of the improved non-cognitive skills on your overall personal development and well-being? In your opinion, how has DKU contributed to the improvement of these non-cognitive skills?* etc. at the end of the interviews, the researcher asked participants to share anything they expected to share about this topic. Also, these questions were translated into Chinese and the interviews were conducted in Chinese. Please refer to **Appendix A** for more detailed information.

Based on participants' responses, the researcher used probing questions to encourage them to speak more. Participants could stop or refuse to answer the questions if they felt uncomfortable or they had no answer. Each interview lasted around one hour and follow-up interviews were determined based on the data saturation. Three participants, Rachel, Alice, and Ximo, were asked to provide more information about the sub-questions regarding "rooted globalism" and "a purposeful life" in this research. Before their interviews, participants were briefed on this research purpose, and the researcher had their signed consent forms. Acknowledging participants' fear of being judged, the researcher underscored there would not be right or wrong answers and their experiences would not be used against them but for this research. The interviews were audiotaped and transcribed. The transcribed scripts were reviewed by five participants for member checks, and they could make changes as they preferred. All five participants did member checks before the deadline the researcher assigned to them.

Observation and Field Notes

Observation is a pivotal component of qualitative research. Merriam (1998) mentioned that observation facilitates the understanding of the context and serves to triangulate the emerging findings. In this research, observation was leveraged to provide detailed information in two aspects. First, during the interview, the researcher paid attention to participants' appearance and tone, in particular, if some topics would raise participants' emotions if they would raise their voice volume, or if they would fall silent. Also, being cautious of their language and emotional expressions like pausing, or silence offered more information that did not speak in words.

Second, DKU was a familiar place to the researcher as he had been working there for five years. The classroom displays, the posters exhibition, the building features, and so on are all components at DKU that could be put down into words through thick descriptions. This assists in accomplishing the field notes. "The written account of the observation constitutes field notes that are analogous to the interview transcript" (Merriam, 1998, p. 122). Saldaña (2013) advocated that field notes are the researchers written documentation of participant observation. Benefiting from the researcher's career responsibilities (recruiter), he collected data and information concerning students' performance, DKU's features, and how DKU’s instructions foster students' growth from multiple stakeholders.

Documents

The third data sources are documents, which allow for data triangulation. "Documents, broadly defined to include public records, personal papers, physical traces, and artifacts, are a third major source of data in qualitative research" (Merriam, 1998, p. 151). The research collected the articles from the official DKU's social media (i.e. DKU's official website, DKU's WeChat account, DKU's recruitment WeChat account, LinkedIn, etc.). Also, other official

document files were collected such as career placement reports (i.e. the career placement reports for the first two cohorts of graduates), academic bulletins, signature work products, and other video materials, all the aforementioned materials were from the official channels of DKU to ensure the accuracy of data. During this research, the researcher found that scholarly articles oriented to DKU were helpful and conscientiously collected. These materials were fruitful in producing rich information about the extensive experience that DKU students could have.

Data Analysis

The process of data analysis "involves organizing the data, conducting a preliminary read-through of the database, coding and organizing themes, representing the data, and forming an interpretation of them" (Creswell & Poth, 2018, p. 248). In this research, the researcher mainly utilized thematic analysis as "theme generation takes the analysis to a deeper, more integrative level" (Rossman & Rallis, 2017, p. 456).

The researcher's data analysis started as soon as he completed the interviews. As the interviews were carried out over two weeks, the researcher listened to recorded audiotapes to gain familiarity with the data. Meanwhile, another burdensome job was to transcribe audio data into transcripts, it took the researcher considerable time to correct and verify the transcripts. Although such a process consumed the researcher a huge amount of time and produced over 100 pages of transcripts in amount, it was a critical process for him to familiarize himself with the data further. Then, these transcripts were sent to participants for member checks with a deadline. Once this process was accomplished, the researcher concentrated on the data analysis. He first read and reread the transcript of each participant (Creswell & Poth, 2018), to make general comments once he had any thoughts, ideas, or confusion.

The researcher used both priori coding and emergent coding strategies. Elliott (2018) articulated that it is a common practice for pragmatic researchers to use both in a research project. Priori codes can serve as an indexing framework in the coding process as "a priori codes set beforehand can be categorized and made consistent within categories" (Elliot, 2018, p. 2855). The coding was accomplished in three cycles. In the beginning, this researcher utilized structural coding to identify quotations (sections of the interview) from students related to the seven animating principles (research question 1), perceived noncognitive skills (research question 2), and components of DKU liberal arts education (research question 3). Structural coding is a research question-based code that segments data relating to specific research questions used to frame the interview (Saldaña, 2013). For the first cycle of coding, the researcher used In Vivo and descriptive coding strategies to code the data. According to Saldaña (2013), In Vivo coding "refers to a word or short phrase from the actual language found in the qualitative data record" (Saldaña, 2013, p. 91). Descriptive coding "summarizes in a word or short phrase - most often as a noun-the basic topic of a passage of qualitative data" (Saldaña, 2013, p. 88). These two coding strategies were helpful in mapping out codes. As for the second cycle of coding, the researcher employed Focused Coding and Axial Coding strategies. According to Saldaña (2013), "Focused Coding categorizes coded data based on thematic or conceptual similarity. Axial Coding describes category properties and dimensions and explores how the categories and subcategories relate to each other" (Saldaña, 2013, p. 209). The process of data analysis is to gain categories, generate themes, and cluster themes into the main themes (Saldaña, 2013). In this research, research questions 1 and 3 mainly adapted both priori coding and emerging coding, the priori codes were from seven animating principles of DKU, and the components of DKU liberal arts education. Research question 2 utilized the emerging coding.

Interpretation is of critical importance which "involves abstracting out beyond the codes, the formation of themes to the larger meaning of data" (Creswell & Poth, 2018, p. 264). Researchers could "interpret data with a large concept, research, or theory" (Rossman & Rallis, 2017, p. 465). For the whole of this research, the researcher was carefully weighing on how the themes could connect with the research questions.

Data Analysis Outline

To arrange the data analysis, the researcher used the table below to organize the data analysis progress.

Table 3.1. Sample Data Analysis Outline

Qualitative Coding for Thematic Analysis and Profiling	
Phase 0	Utilizing structural coding to identify quotations (sections of the interview) from students related to the seven animating principles (research question 1), perceived noncognitive skills (research question 2), and components of DKU liberal arts education (research question 3).
Phase 1	During the first round of coding, the researcher used *descriptive* coding and *in vivo* coding methods.

	Writing Analytic Memos about coding data	• Using coding methods, the researcher was looking for any specific themes or patterns but rather trying to identify and label as many concepts and ideas in the data as possible. • Memoing about the larger takeaways, potential themes, and potential profiles that might show up. • Memoing about analytic decisions the researcher made when deciding what was coded, and what was not coded using open codes.
	Developing a codebook about significant codes (code, description of the code, example of the code from the interviews).	
Phase 2	Focused Coding/Axial Coding to develop connective categories of students' confidence and attitudes.	During the second round of coding, the researcher conducted a more focused and systematic analysis of the data, with the goal of identifying the central concepts, categories, and relationships that emerge from the data.
Phase 3	Finalizing themes and profiles that emerge from the interviews.	
Writing individual student write-ups for each participant to describe their profiles.		

To better secure the rigor of data analysis, this researcher adopted an analytic memo. According to Saldaña (2013), "they are to document and reflect on the coding process and code choice; how the process of inquiry is taking shape; and the emergent patterns, categories and subcategories, themes, and concepts in the data" (p. 42). Such a technique could assist the researcher in reflecting and expounding on data. The researcher acknowledged this memo is a necessity for him to keep his dissertation on the right track. His analytic memo incorporated multiple aspects and he put his consideration and reflexivity into notes. Furthermore, to make the

coding, analysis, and interpretation as well as other processes in data analysis parts objective and insightful, the researcher took advantage of analytic memo writing to document and reflect on his coding process and code choices as "coding and analytic memo writing are concurrent qualitative data analytic activities" (Saldaña, 2013, p. 42).

One typical situation for this research is that the interviews were conducted in the participants' indigenous language of Chinese, and the researcher selected to translate the interview excepts based on write-up needs. To keep the authenticity of the research, the researcher followed a common procedure guided by Roulston and Choi (2018): "Excerpts from interviews conducted in a language other than English are presented in English with the original language included in block text beneath the translation" (p. 11).

Trustworthiness

Maher et al. (2018) mentioned that "trustworthiness is considered a more appropriate criterion for evaluating quality studies" (p. 3). Creswell & Poth (2018) noted that trustworthiness could be better improved in credibility, transferability, dependability, and confirmability. Merriam (1998) summarized several strategies to enhance the validity and reliability of qualitative studies. In terms of internal validity, she described that triangulation, member checks, long-term observation, and researcher bias could address internal validity. As for internal reliability, triangulation and audit trail could be helpful. In regards to external validity, rich and thick description matters.

In this research, multiple strategies were executed to ensure the worthiness. The researcher utilized the same interview protocol. Member checks were processed as the participants could access their interview transcripts and make changes and adjustments or add

more information according to their willingness. Generally, all five participants in this research accomplished this process before the deadline the researcher set for them. Prolonged engagement could be fulfilled as the researcher had a work experience in this educational organization and his work responsibilities had large relevance concerning students' performance at large. Such long-term observation could add to the trustworthiness (Merriam, 1998). Also, triangulation of data from multiple sources was accomplished as the researcher collected data at least from observation and documents. It is worth knowing that the researcher also made cross-check about the information provided by participants, for instance, when student Rachel mentioned the U-Corp project she participated in, the researcher searched and found a brochure at DKU describing the right project.

Rich and thick description is necessitated by qualitative research (Merriam, 1998). In this research, the researcher purposefully used the In Vivo coding method and kept a chunk of participants' words quoted in the dissertation paper. Through this research, the researcher utilized an audit trail to record his thoughts and how he landed some codes, categories, themes, and findings as well as his struggles and epiphany moments. Furthermore, in the whole research, the researcher kept asking himself the logic behind the constructs and connecting the variables under sufficient rationale. Last but not least, in qualitative research, interpretation is subjective to the researcher, and a self-reflective positionality statement about the researcher was presented.

Ethical Considerations

When conducting social research, the researcher's goal is to minimize the potential harm to the Other and their constituents (Hammersley & Traianou, 2012). To minimize the potential harm to the participants, the researcher obtained the approval Institutional Review Board from

Kansas State University by emailing all data collection activities to illustrate his research intentions before his data collection activities.

Prior to each interview session, the consent forms addressing the data collection procedures, the extent of confidentiality, and other measures to prevent harm to the Other were presented, and participants' signatures were required. All five participants in this research signed this form (**Appendix C**) and returned it to the researcher.

To ensure the participants were protected, anonymity was executed as pseudonyms were given to them to safeguard their identities. This measure also works as an effective way to encourage participants to speak their true thoughts so that they can offer data freely (Shenton, 2004). Each transcript for participants was sent to the participants to get their further review so that they could reorganize their thoughts, add or delete some thoughts, and return them to the researcher as number checks. Also, the recorded data would be kept confidential and only accessible to me and these data would be destroyed based on the research schedule.

One typical situation for this research was that due to students' heavy schedules and the researcher’s good intention of compensating them properly, to recruit participants, the researcher offered compensation of a shopping card worth 200 Yuan (=29 US dollars) as a thank-you gift for each student who accomplished the interview. It was out of courtesy. Based on Connelly (2014), this amount of incentive is not excessive and should meet the ethical requirements.

Researcher Positionality

Additional bias could affect the credibility of the analysis (Houghton et al., 2013), thus, the researcher narrates his positionality statement to improve the trustworthiness of the data.

The researcher was born into a common peasant family in the middle part of China. His education was dependent on himself and his schooling as both parents were illiterate. The researcher experienced an epiphany moment during junior high school which allowed him to gain into a five-star middle high school in his county. Afterward, with some talent in high-stakes tests, he overcame the Gaokao and went into a first-tier university in the eastern region of China. As a first-generation college student, with an undergraduate degree, he then pursued a graduate degree in Shanghai and finished obtaining it in 2011. Out of his candid self-assessment, the researcher felt limited competence in noncognitive skills before he went into the career setting in 2011. His professional experience in the international domain and thus being a recruiter at DKU spawned his ideas on noncognitive skills. In retrospect, he sensed the importance of noncognitive skills which led him to research this aspect.

One critical period for the researcher was to work as a recruiter at DKU where he furthered his understanding of the education system in the U.S. It guided him to be a global educational practitioner. As an undergraduate program recruiter at DKU, the researcher considered the Doctor of Education for he had a strong interest in liberal arts education, eager to understand the cultivation of the next generation of talents. The partnership between Duke University and Wuhan University is the pillar of DKU which symbolizes the exchange of Eastern and Western education philosophies. Liberal arts education is the recognizable consensus for both sides. Moreover, the education at DKU is delivered in compliance with Duke University and DKU 's undergraduate program is labeled as one of the colleges of Duke University. The work at DKU shaped the researcher's perspective and mindset at large.

In July 2022, the researcher ended his five-year career at DKU out of family relocation, which could guarantee that the researcher was not influenced by his position as a recruitment

officer who has a natural impulse to speak well of the university. The immersive experience at DKU provided the researcher with both ETIC and EMIC views (Holmes, 2020). Through this study, the researcher expected to understand the mechanism of noncognitive skills development for Chinese students at DKU. As he holds no more a position at DKU, the researcher upholds the objectivity of this research and states no conflict of interest in the research.

Essentially, the researcher advocates equity, diversity, inclusiveness, and respect toward others.

Chapter Summary

This chapter starts by reexamining the research topic, research purpose, and research questions, and then the researcher uncovers the rationale for this qualitative case study and research site selection. Subsequently, the researcher offers a detailed delineation of data collection and data analysis, and an outline for data analysis is constructed for better understanding. Trustworthiness and ethical considerations are presented. Finally, the researcher's positionality statement is crafted. In the next chapter, the findings of this research are illustrated according to the research questions.

Chapter 4 - Findings

This research investigates Chinese students' noncognitive skills development at Sino Joint Venture Universities through a case study of DKU. Via a qualitative research study, this chapter presents the major findings in accordance with research questions.

Participants Profiles

At the beginning of this chapter, participants' profiles are presented. The researcher offers a general label for each of them. These labels are reasonably extrapolated based on the researcher's observation of participants (benefiting from his recruitment role) as well as participants' narration during the interview. For instance, the participant Rachel demonstrated business eloquence and addressed strong interpersonal skills in the interview, which led the researchers to label her as "a powerful businesswoman". These profiles here assist readers in understanding the individual characteristics of participants as well.

Table 4.1. Participants Profiles

Pseudonym	**Gender**	**Major**	**Future Plan**	**General Summary**
Ximo	Male	Data Science	Graduate study	A passionate explorer, the researcher has known Ximo for a long time. He worked as a student worker for the China Enrollment Management Office, where he answered inquiries and led campus tours, the researcher managed these student workers and I had a close interaction with him. He also served as a student panelist during the information session in Changzhou City, Jiangsu province. Ximo is full of energy and eloquence, he is passionate and optimistic, being an explorer.

Rachel	Female	Psychology	Graduate study	A powerful businesswoman, this interview was the first time for the researcher to meet Rachel, she is energetic, demonstrating powerful eloquence. After the end of the interview, she and the researcher had an extended talk, she asked why the researcher pursued a doctoral degree. The labeling came from her experience and understanding of communication with multiple stakeholders as well as her powerful communication manner.
Alice	Female	Behavior Science	Applying for jobs	A gentle equality pursuer, this interview was the first time for the researcher to meet Alice. She seemed to have a business manner, she asked what the gift card would be and checked my time for the interview. She had obvious likes and tolerated dislikes. The labeling came from her insistence on equality with a gentle attitude.
Yana	Female	Data Science	Graduate study	A democratic citizen, it was the first time for the researcher to meet Yana and she was talkative. Incredibly, there is always someone in an organization who knows everything about this organization. Yana is one such example. Her knowledge of DKU's inside information typically about the "bad" sides of DKU helped the researcher to characterize her as a democratic citizen.
Susan	Female	Global Culture Literacy	Graduate study	A philosophic scholar, it was the first meeting, and the researcher was impressed with Susan's expression she could see things in-depth and had extraordinary competence in language expression. The labeling was attributed to her thoughtful and provoking consideration of herself within DKU.

The First Research Question is: Which specific noncognitive skills have Chinese students identified as being significantly improved during their study at DKU?

This research question is summarized based on the seven animating principles missioned by DKU. Based on the researcher's intention and creativity to illustrate this finding, the table below describes the noncognitive skills that five participants showcased. Then each skill is purposefully supplemented by rich details.

Table 4.2. Descriptive Findings about Participants' Noncognitive Skills

No.	Seven Animating Principles	Ximo	Rachel	Alice	Yana	Susan
1	Rooted Globalism	0	0	0	0	0
2	Collaborative Problem-Solving	1	1	1	1	1
3	Research and Practice	1	1	1	1	1
4	Lucid Communication	1	1	1	1	1
5	Independence and Creativity	1	1	1	1	1
6	Wise Leadership	1	1	1	1	1
7	A Purposeful Life	0	0	0	0	1
Note: 1 signals strong evidence and 0 signals weak evidence						

1) Rooted Globalism

According to DKU's definition, *Rooted Globalism* is to cultivate informed and engaged citizens who are knowledgeable about each other's histories, traditions of thought and affiliations; those with rooted globalism are skilled in navigating among local, national and

global identities and commitments (Duke Kunshan University, n.d.). In this research, globalism does not emerge in a salient pattern. The relevant experience from Yana and Rachel is the awareness of stereotypes and individual distinction is far larger than collective distinction. When the researcher asked about her understanding of globalism, Rachel paused and admitted it was hard to enunciate. Ximo thought he gained an intercultural communication strength, typically gaining a mindset of easiness to getting along with foreign counterparts through the exchange experience at Duke University. Susan was conscious that she had a much clearer vision or a more detailed recognition of this world that she would work in the future with peers. Alice did not appear to mention anything in this aspect either.

Generally, there is no strong evidence for the rooted globalism since participants are mainly oriented toward cultural awareness and stereotypes. Participants receive an education in English and work with diverse counterparts (i.e., foreign professors, international students, exchange at Duke University, etc.), they certainly acquired a sort of competence working in an international environment, but such competence is distinctive with being a global citizen.

2) Collaborative Problem-Solving

According to DKU's definition, *Collaborative Problem-Solving* means instilling the habits of collaboration and the ability to synthesize disparate insights in solving complex challenges (Duke Kunshan University, n.d.). All participants here demonstrated solid collaboration and problem-solving skills, and evidence could be illustrated in the diverse experiences they went through. Rachel offered a good example of how she worked in a team to handle team conflicts, as her team members proposed three proposals for a clinical trial and each one had their assumption that they had the best one. In such a deadlock, the team organized an open meeting to solve this problem as each took turns to present their plans, which eventually led

to the final agreement. In addition, one of their teammates felt isolated from the whole procedure as his plan was not picked up. He just worked on his proposal, and Rachel successfully persuaded him to abandon his obdurateness, which required a dexterous communication skill.

An example of Ximo was that he worked as a teaching assistant for the new course *Media Arts.* Due to the fact that this is a brand course, he had no references and had to plan the whole course materials with the course professor. Susan summarized that through team-based learning provided by coursework, students discussed roles and worked collectively to distribute assignments to accomplish projects. Furthermore, Yana and Alice had the same experience and feelings as well regarding cooperative learning at DKU.

Generally, these participants perform excellent collaborative problem-solving skills, which are evident in their description of course projects, research, teaching assistance, as well as other relevant works. Such skills corresponded to the feedback from employers and parents that DKU students have strong problem-solving competence.

3) Research and Practice

According to DKU's definition, *Research and Practice* involve an enhanced ability to forge links between theory and practice in the many-sided and rapidly changing world of human needs (Duke Kunshan University, n.d.). This constituent has an inseparable relation with the cognitive aspect whilst it does present necessary qualities for noncognitive aspects. Yana mentioned that through the exploration of research opportunities, she found her interest after she gave up her research in financial engineering and moved to the healthcare area. Alice was extremely passionate about her signature work in studying carpooling strategies as she needed to "do real research, collect data, and pay money". *我真的要去把这个实验弄出来，要去收集真实的*

数据，要去分析，要去花钱。She compared her thesis with the ones in national universities in China and was proud of her devotion and achievement.

Furthermore, the rigorous research requirement culminated in the final thesis which is named as signature work. "Signature work calls for each student to identify one or more questions, problems, or issues that are of particular importance to him or herself and to society, and to investigate these through a combination of curricular and related co-curricular experiences" (Duke Kunshan University, n.d.). In this aspect, all participants demonstrate solid noncognitive competence in conducting research and practice, the assertion of which could be espoused by the various reports of DKU students' learning experiences in diverse social media.

4) Lucid Communication

According to DKU's definition, *Lucid Communication* involves the development of the ability to communicate effectively, both orally and in writing, and to listen attentively to different viewpoints in coming to mature judgments (Duke Kunshan University, n.d.). Yana described that she reinforced her communication strength through her student worker experience at CSCC (Center for the Study of Contemporary China) by conducting interviews. Rachel's deep understanding of team-based projects ensured her excellence in addressing diverse situations, defining goals, keeping people on the same page, letting others know their roles, and solving problems. Ximo described that his communication in English was strengthened in English instrumental courses, and his engagement in multiple interpersonal activities or jobs spoke out this talent. For instance, he was a student panelist who shared his learning experience for future candidates, and being a campus tour leader and student worker at the recruitment office requires him to have exceptional presentation skills. Susan's communication in both verbal and written could be reflected through her meticulous language use. During her interview, the researcher

complimented her eloquence. Alice characterized her people skills as she believed that she could communicate in a broad subject, evidenced by her internship as a job hunter.

Generally, five participants all showcase outstanding communication capacity, which is not only supported by their interview performances as they were communicative but also concreted by their sharing of relevant experiences. Although such communication strength is solid, yet, the degree of communication skills is individually varied.

5) Wise Leadership

According to DKU's definition, *Wise Leadership* is to shape thinkers and doers who possess the moral compass to guide communities and institutions toward a common good and who have the wisdom and technical competence to deal effectively with complexity (Duke Kunshan University, n.d.). Yana did not speak about her experience as a leader, although she mentioned that she participated in some leadership training activities, she criticized these activities are useless for graduate school application. She voiced that as a new university, DKU's clubs require students to build the charter and recruit new members, as well as others, which coerces students to gain leadership experience. Rachel created the first Taichi club at DKU, allowing her to experience the founding process. Ximo was credited with being a teaching assistant as he set up a new syllabus and answered students' questions. He was also a leader in diverse activities (i.e. orientation leader, TA, campus tour leader, etc.). Although Susan had experience in managing a department of a volunteer association and supervising some volunteer teaching activities during COVID-19, she recognized herself not as a leader, attributing that she was not a person for being a leader.

Alice stressed that in course projects, she came to be a leader "naturally" as she was an upper-grade student or senior, in the process of arranging tasks and offering guidance. She

pointed out that in a biology course, a team of 3 or 4 members, aside from her, all others are freshmen, and as this project needed the knowledge content they should learn during their sophomore and junior years, it was her to find a template and guide their process. During the interview, the researcher asked her how she perceived leadership happening naturally, and she answered: "It is also a learning process because you can feel how the senior students guide you during your freshman and sophomore years. So, naturally, when you reach this position, you will imitate them." *也是有学习的过程，就是因为你大一大二时候就会感受到大三那次学姐学长是怎么带你的，然后就就很自然而然的，就是到当你到这个位置，你就会模仿他们。*

Leadership is another salient characteristic that participants perform in this research as the embedded teamwork characteristics exist at DKU. Students are either naturally led to take some leadership responsibilities through projects such as Alice, or purposefully seek leadership roles in multiple organizations such as clubs and internships.

6) Independence and Creativity

According to DKU's definition, *Independence and Creativity* are to nurture free inquiry, deep reflection and a drive to ask interesting questions and find compelling answers (Duke Kunshan University, n.d.). Yana presented a striking view that she felt that DKU students do not have independence; from coursework and activities, she could see the parents behind. She even illustrated an example that once one parent blamed a professor for her son's failure in article publication, which attracted followers of other parents. She was aghast about why there exists a parent association at DKU.

Rachel shared that her critical thinking skills were strengthened at DKU as she could find new perspectives to view things and understand others, increasing her recognition competence. Personally, she believed that she did not rely too much on her family as she posed that she

selected a university far away from her town and lived independently in Kunshan (DKU's location). Ximo demonstrated multi-tasking skills as he would accomplish multiple tasks synchronically. During the interview, the researcher was constantly impressed by his optimism and passion as he labeled himself as a born explorer.

Susan demonstrated self-exploration and analysis about herself, she acknowledged who she was and why. For instance, when the researcher asked her why she sensed a sort of isolation at Duke exchange, she answered that "she was not in the world, she was the subject".*自己不是主体的世界。* She summarized, "Personally, I feel that during my four years at DKU, although I have grown in knowledge and skills, I believe that compared to my time in junior and senior high school, I have become more introverted. I actually do not have as much desire or opportunity to express myself as before".*我个人来讲，我在昆杜这四年虽然在见识在能力上有增长，但我其实我觉得我整个人相比原来初高中是向内收的,其实没有那么多表达自己的欲望和和机会了。*

Alice voiced that she reinforced her mindset of being herself, and to be her "CEO" is the concept that she holds, she regarded equality as a paramount tenet either in academia or careers.

Generally, these participants showcase high-level creativity. However, they harbored different understandings of being independent. Among these five participants, Yana mentioned that the parents always behind their children to puppet their children's learning was a surprising finding, however, it might need further investigation of this phenomenon.

7) A Purposeful Life

According to DKU's definition, *A Purposeful Life* includes forming reflective scholars who test their core beliefs, connecting their course of study to big questions of meaning, and who build the capacity for lifelong learning and exploration (Duke Kunshan University, n.d.). Yana was aware of her life path and intentionally selected her future. She expressed a wide critique of

the DKU community, which could be interpreted as a quality of being a democratic citizen. When being posed this question, Rachel sensed the difficulty of answering it and she was silent for a while, she said what she wished to be had a strong connection with the ideologies of current Chinese society. While society expects to make big money and gain privileges and social status. "Even though I am studying at DKU, sometimes I cannot escape this viewpoint. Like when I communicate with some of my professors, I tell them that I am very nervous, and I am afraid that I will be unemployed after graduation..." *就是虽然在 DKU 我学习，但是有的时候你并不能摆脱这样的观点，就像我有时候和我的一些教授去沟通的时候，我跟他说我很紧张，我很怕自己到时候会失业，毕业就失业。。。*She went on to offer an example stressing that it is difficult to take a gap year, it is an "unforgivable sin!" *不可饶恕的罪过！*According to Rachel's views, students cannot do what they like, it is an oppression of Chinese society. In general, she confirmed that DKU helps little on this point.

Ximo expressed his optimism as he would continue his exploration. Susan felt overwhelmed by the topic, unsure if she could effectively explain it within a limited timeframe. She said that for a normal life, having a good college, good work, and some hobbies were her previous thoughts; however, she expressed and did not know what to say. Her final words for herself were to have graduate study and then work.

> Susan: For me, speaking purely from a realistic perspective, what I can think of at the moment is this: If we talk about it from a mindset perspective, I feel that after these past few years of the pandemic, the most important thing now is that everyone is living in peace and good health. Having a good body is already great. Then, because I have also gone through internships, and seen some classmates looking for jobs around me, I gradually realized that many things are beyond our control, but you can still give it a try.

I think the key is to try to do things with a clear conscience. Whether from a moral standpoint or in terms of seizing opportunities, I have come to realize that it may be really difficult for ordinary people to achieve something extraordinary, but I am grateful that I can continue on the path of literature that I love. *我对目前就是完全从现实意义上来讲的话就是能想到的是这么。如果从思维的方式来讲的话，我觉得首先经过疫情这几年，现在觉得大家平安健康的活着。有一个好身体就已经很好。然后其次就是因为也经历过了找实习，包括身边一些同学找工作，然后也逐渐意识到很多人是很多事情是人力不可不能及，但是你也可以去试一试，就是我觉得尽量做到问心无愧吧。就是不管是从良心上来讲还是从。争取机会这方面来讲就是我也逐渐意识到可能普通人真的很难去干一番惊天伟地的事业，但是我觉得很感激能在自己喜欢的 literature 这个道路上一直走下去。*

Alice was the only participant who went for a career after graduation. She mentioned that long after the Gaokao, she would still have nightmares about not being able to finish the math section of the exam. "Yes, and now, I feel that even if there are setbacks or challenges at work, my mindset is much better than others. I think that failure is not actually scary. You will always have the opportunity to do what you are good at, to work." *然后现在的话其实我觉得就是哪怕是在工作时有一些挫折或者怎么样，我的心态就明显会比别人好很多，就是我觉得就是失败其实并不可怕。就是你总会有机会去去做自己擅长做的事情。*She theorized that her current decision for her career was due to her wise personal decision.

A purposeful life has not been sufficiently performed in this research as these participants at large express their concern about their professional development or elaborate their individual mindsets. The understanding of having a purposeful life is vaguely presented. From Susan's words, this question is affected by COVID-19 as she focused on the present moment. The big question of means in DKU's definition does not take a concrete shape here.

The Second Research Question is: How do Chinese students perceive the impact of improved noncognitive skills on their overall personal development and well-being?

Within this qualitative case study, strong noncognitive skills are the label of DKU's education. Five participants in this research expressed that noncognitive skills can benefit their career development, assist them in gaining their life philosophy, and even handle unexpected challenges. For this research question, three themes emerge and are categorized such as enjoying the fame of DKU, bettering career development, and handling life challenges. In the following sections, more information and analysis are provided.

Enjoying the Fame of DKU

Entering a premier Sino Joint Venture University in China is a privilege as it entails applicants with both solid academic performance and social-cultural capital. DKU is the premier one in this group, and to be one of DKU students in certain aspects signifies honors. Yana mentioned that graduates from DKU are distinguished for their strong overall competence as she used one of her high school classmates' voices to espouse this point.

> Yana: When I was a sophomore, I reconnected with a senior from my high school who is currently pursuing a Ph.D. at Cornell University. She completed her undergraduate studies at the University of the Chinese Academy of Sciences, which is affiliated with the Chinese Academy of Sciences. She mentioned that she had a positive impression of our school, which I found surprising as DKU is not widely recognized. During her time, DKU had not yet enrolled undergraduate students. I was curious as to how she knew

about our school, and she explained that during her Ph.D. application process at Cornell, she had a group interview where she was grouped with a senior from DKU. She was impressed by the interviewing skills of the DKU students, which made her think that students from DKU are well-prepared. This might indicate that DKU provides opportunities for students to develop their skills." *我大二的时候，然后跟我一个高中学姐联系上了,她现在在 Cornell 读博，他本科是就是国科大的，中国科学院大学。然后她跟我说就是说她对我们学校印象就蛮好的，然后我其实蛮奇怪的，因为昆杜就是知名度还没有说那么高。然后，包括她那一届的时候其实昆杜还没有招本科生嘛。我就很奇怪她为什么会知道，然后她跟我说就是说他申请 Cornell 就是博士生的时候，因为是群面，所以有一个就是昆杜的一个学姐跟他分在一个组，嗯然后就说感觉昆杜那个学生的面试就会很厉害，我感觉这方面可能也是就是说昆杜平常会锻炼。*

Although Yana said that DKU is far better than traditional universities in China, she believed that DKU lacked behind some other Sino Joint Venture Universities such as New York Shanghai. Alice spoke out that she came to DKU because she took a summer course at Duke University in the U.S. which impressed her because of this learning experience. Her final enrollment at DKU made her dream come out. Ximo stressed that his willingness to study at DKU came out of his research through attending DKU's information session at his high school.

Bettering Career Development

As students' next steps are professional, participants came naturally to understand how these noncognitive skills benefit their career development. Yana mentioned that DKU could offer a great many experiences put into the resumes, facilitating their career-seeking. Rachel underscored that teamwork skills are inseparable in future career settings as she is aware of

business collaborative settings. "One's individual competence, particularly in business environments, no matter how strong your competence is, means a little, as eventually, you need to work inside a team."*然后这样的话其实说实话，你一个人能力，尤其在商业环境当中，你一个人能力再强其实也没有太多的用处，最后你还是要和一个团队去合作。* Also, her view was echoed by student Ximo who thought that the noncognitive skills he developed at DKU would be valuable in the real industry world, culminating in reporting, selling, public speaking, interacting with different people, planning, and handling unexpected challenges.

Susan underscored that during her internships, her performance was outstanding-in her humble words, "I did not add trouble to the team, and also fulfilled my duties conscientiously." *我至少没有给团队添麻烦，并且也很尽职的完成了自己的工作。*What is more, while connecting her internship experience, Alice reiterated the concept of the "CEO of oneself", which offers a personalized rhythm for her to arrange work and schedules. She considered that DKU's learning boosted her communication skills and enabled her to talk in broad subjects, and she expressed excitement, considering it awesome as she was going to be a job hunter.

In addition to the great benefits that noncognitive skills that DKU's students have on their career attainment and development, other attributes or values are critical as well. Susan's growth was salient as her family entrusted her to make her own decisions, "I am now increasingly entrusted with the decision-making power for major life decisions, and I believe that I can take responsibility for the outcomes."*现在越来越放手的把这种人生重大的决定的决策权交给我，相信了我可以为这个结果负责。*This trust could be seen from other participants as well. Ximo's parents would approach him first to ask his opinions instead of delivering orders to him. Susan articulated her thoughts about what she envisioned her future. She also said that the skills and mindsets she progressed at DKU allowed her to stick to her own pathway in literature, she

developed a critical attitude in observing the external world around her and being peaceful and determined in selecting her own ones.

Handling Life Challenges

One tone reiterated in Alice's was her life philosophy or life attitude she developed during her study at DKU. Compared to her beginning of study at DKU when she often had nightmares about the Gaokao, her current mindset was more peaceful and tolerable. Meanwhile, Alice highlighted that equity is the most important work and life attitude, no matter where, one should equally treat others and be equally treated as well.

It is incredible to see that participants narrated stories about how they situated themselves in meeting unexpected challenges. For instance, Ximo spoke out about his experience when he met an airplane emergency accident during his flight to the U.S. and regarded that his experience at DKU shaped his resilience and allowed him to calmly handle this emergence, meanwhile, he took this experience as an opportunity for handling unexpected problems in the future.

> Ximo: During our trip to Duke, our plane suddenly experienced a loss of cabin pressure. The pilot swiftly descended to a lower altitude and made an emergency landing in Las Vegas. Encountering such unexpected situations and challenges has provided me with a sense of preparedness for facing various challenges in the future".*像我们在去 Duke 的过程中，我们的飞机突然舱内失压了，然后就我们机长迅速下降高度，就迫降到拉斯维加斯去了，就还是很多那种面对突发情况，或者说一些挑战的一个情况在，就说有这些经历作为储备就是我也觉得也是为未来面对各种其他的挑战的时候就有一定底气在。*

The Third Research Question is: How does DKU facilitate Chinese students' noncognitive skills development?

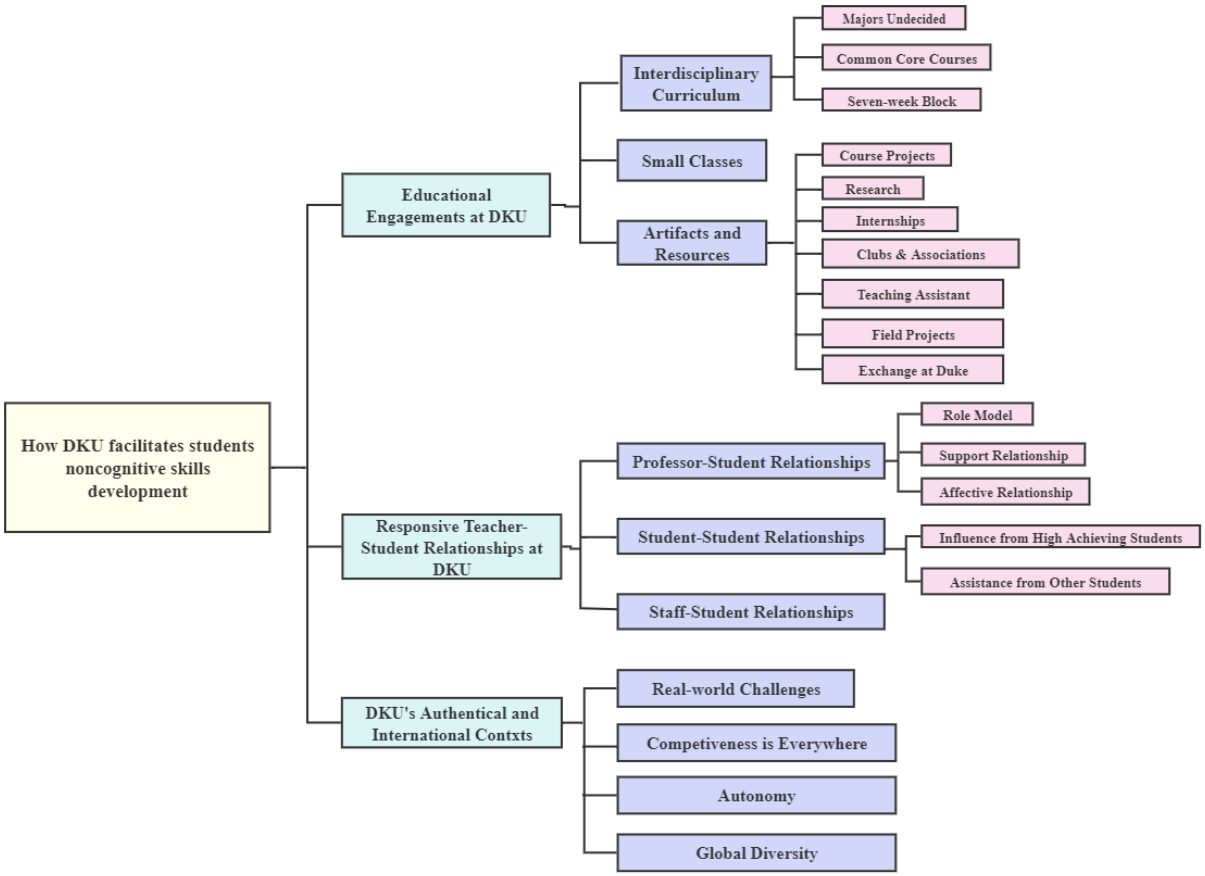
To answer this research question, three major themes are identified: Educational Engagements at DKU, Responsive Teacher-Student Relationships at DKU, and DKU's Authentical and International Contexts. Figure 4. 1. presents a visual layout of findings below.

From this figure, the researcher found that each theme incorporates several subthemes. For instance, as for Educational Engagement at DKU, students generally covered interdisciplinary curriculum, small classes, and artifacts and resources; amidst artifacts and resources, seven items were generally articulated, participants at large valued course projects, research, internships, etc., yet, presenting divergent voices on their effects.

In terms of Teacher-Student Relationships, this research successfully identified three sorts of relationships; participants embraced professors to be their role models, provide them with supportive, and affective relationships. Also, these interviewees are influenced by high-achieving students and they could obtain assistance from other students.

Lastly, DKU's authentical and international environment presented four layers of contexts as participants described that DKU addresses real-world challenges, it is a competitive environment, DKU offers a localized autonomy and this university is of global diversity.

Figure 4.1. DKU Facilitating Noncognitive Skills Development



Educational Engagements at DKU

Interdisciplinary Curriculum

Majors Undecided for first two years and free exploration to multi-disciplinary

An interdisciplinary curriculum allows students to export diverse disciplines, which should be the core of liberal arts education. However, this study presents mixed attitudes from these participants.

Ximo admitted that the interdisciplinary curriculum could create a space for him to experience and compare the two majors that he was going to declare and eventually selected data

science through the selection of courses and practice. He also admitted that the interdisciplinary approach mainly strengthened his ability to read, speak, and write academic English.

Susan pointed out that this setting affords a chance for students to freely explore different subjects, which made up the high school missing. For her, through exploration, she transformed from a single-tracked student to a multiple-discipline student, she said: "I am studying literature, I can also take media art courses. In the future, my research focus may shift from purely literary studies to exploring how to transform words into visual forms through media arts, reaching a broader audience with my research direction." *就比如说我学文学，但是我也可以去 media art 的课。那么以后可能我的研究方向就会变成一个，就会从一个纯文学的方向变成一个怎么样让文字让我们通过 media arts 的形式转换出来，然后有更大的一个受众群体，这么一个研究方向。*

> Also, her words reflected the unique value of this education for Chinese students,
>
> Susan: I think the interdisciplinary course offerings are something I quite like. Although having too many interdisciplinary options, in the beginning, led to difficulties in completing major courses, later on, I appreciate the freedom that these interdisciplinary courses provide for students to explore their personal interests. As a Chinese student, it was challenging to have a broad range of options to explore and choose future interests in my previous secondary education. *我觉得跨专业的课程设置，我还蛮喜欢这一点，虽然前面跨专业的选择太多导致后面专业课有点上不完，但是前面，这种跨专业的课程设置，就让我觉得首先是允许学生可以跟自由的去探索自己的个人兴趣，因为作为中国学生的话，在原来的中学其实很难有一个比较广泛的范围去探索和选择自己未来的兴趣。*

Although these benefits are obvious, yet, a divergent voice was presented by Rachel who pointed out that the intense and limited timeframe, students' mindset, and introductory courses

hindered students from exploring diverse disciplines. She admitted that she was one of them who failed to miss the exploration. In her words, there should be more than a simple few.

> Rachel: To be honest, I feel like the entire year is relatively short for exploring different disciplines because we still have to take courses like EAP (English for Academic Purposes) and other requirements. Also, in the first year, students haven't fully transitioned their mindset to the new cultural environment. Many students rush to take basic courses like Math 101 or Math 105, so a lot of us, including myself, may have missed out on opportunities to explore different majors.*但其实说实话就是一年的这个整个时间还是相对来说我觉得还是少了一点吧，因为其实我们毕竟还要上什么 EAP 之类的其他的东西，然后，反正每年第一年大的文化环境大家就是还没有转变出来 mindset 吗，很多同学会抢着去上那些像什么数学 101 数学 105 这样的基础课，然后所以很多同学就包括我当时其实也算是错失了一些探索不同专业的机会吧。*

Common Core Courses

As a key component of liberal arts education, DKU offers three common core courses during freshman, sophomore, and junior years, the courses are respectively*: China in the World; Global Challenges in Science, Technology and Health; Ethics, Citizenship and the Examined Life*. As one salient feature of DKU's education, these common core courses are promoted as attractive points in various contexts. Significantly, in the 2019 summer information session, as an organizer of this event, the researcher observed a DKU student's father who was invited as a guest speaker proudly announced that *China in the World* is one of the magnificent designs by DKU when he was facing massive audiences. Additionally, these innovative courses were credited in many other situations, *China in the World* won an award for teaching innovation in the 2020 Apereo Teaching and Learning Awards" (DKU, 2020).

One unexpected finding from this research is that common core courses, an essential aspect of liberal arts education, suffered a great much controversy in this research. One complaint uttered by Rachel was that the grading was extremely stringent and stressful, students just did not know why to learn these courses.

> Rachel: Many of us don't understand why we have to study topics like the Qing Dynasty Manchu state in history classes, especially for those who don't enjoy history. It can be very stressful, and discussions in class may be confusing. However, we feel pressured to participate in discussions to meet the participation rate requirements. It reached a point where some students, to boost their participation rate, would prepare scripts and raise their hands to share irrelevant information when the teacher asked a question. This led to off-topic discussions that spiraled out of control, and the teacher would become confused about why the student was sharing unrelated information. *就是大家不明白为什么我们要读相关就关于上面清代满洲国之类的这些相关的历史，就是尤其是对于一个不喜欢历史人来说，简直就是啊，就是非常 stressful，然后上课聊的东西然后就是也不懂，然后，但是大家又非要就是去混 participation rate，就非要去，甚至就是当时严重到什么程度啊，就是我能清楚的感知到，就是有些同学，他们是准备了一些文稿的，就上课，无论老师问什么问题，他为了 participation rate，就是他完全不相关的东西，他也会上去举手，就说他一套完全不相关的东西，然后老师也很迷惑为什么他这么说，但是为了接他的话呢，就整个就是之后，聊的话题越来越偏，越来越偏，而且就完全控制不住了。*

Rather than simply complaining, Rachel strongly asserted that DKU should improve its common core courses to produce a better education experience.

Seven-week Block

The Seven-week Block is another realm that was uniquely designed and implemented by DKU. According to the history of DKU, the seven-week block came to a fruitful implementation after a broad discussion from educational professors and experts. Such a semester schedule is unique in China as no other Sino Joint Venture Universities or traditional Chinese universities implement this seven-week block. It is not a feature of Duke University. It is a novel innovation at DKU. The traditional 14-week semester is purposefully divided into two seven-week blocks at DKU, and in this seven-week, students take two to three courses. Such a system is conscientiously designed to better students' learning and facilitate interdisciplinary interaction. However, through this study, many negative views were poured around this innovative block design, from multiple stakeholders including students, parents, and even professors.

Yana criticized that these two seven-week blocks seriously damaged students' learning, and were heavily or even viciously criticized by her classmates, the main downsides were characterized as "instant chicken"*速成鸡*, "short-term crazy cramming"*短期内给你疯狂填鸭,* and students could not memorize the knowledge and they had no time for review.

> Yana: Recently, it has been constantly criticized. It usually starts towards the end of the study period, around the sixth week. Every time, my friends on social media are all complaining. The main issue they are criticizing is the setup. While seven weeks might be manageable, we have to go on an exchange program to Duke University for half a year, where the term lasts 14 weeks. So, during my time at Duke, I felt it was the happiest time of my four years in university. However, upon returning, the criticisms started again, and the contrast felt too intense! *对一直在被骂，我最近是每到学期末这个时候开始，大概从第六周开始，朋友圈全在骂，对，每次都是，就是大家都在骂就是说说这个设置就主*

要是，它 7 周也就算了。中间半年我们是要去杜克交换吗，杜克那边是 14 周。嗯对，所以在杜克那面我感觉就是我大学四年最快乐的时间，然后回来之后又开始骂，是对比有点过于强烈了！

Such a strong dissatisfaction was echoed by another participant Rachel. When talking about this block, she took a deep breath and uttered "Gosh", a relief sigh. She stressed that it caused damage to students as it is extremely intense if students failed somewhere during the course, they might never catch up. Worse, it creates disconnection and chaos. In addition to the short-term memorization, such blocks caused a great of repetition in knowledge as students faced repetitive course content in the following semesters' courses.

Rachel: Gosh! This is an issue that students and even parents have been consistently raising with the school. This short semester really, oh, has placed a lot of pressure on the students because we also took some courses and experienced a 14-week semester. Especially for subjects like math and statistics, in a seven-week block, it's like compressing what others learn in 14 weeks into seven weeks, which is very challenging. Anyway, the problem with a 7-week course is that, well, the time is so short, and it affects the coherence of the course. The entire course seems disjointed and lacks a systematic approach... Some teachers address this issue by repeating content in class, leading to a lot of repetition and, ultimately, wasting some time. *天哪！这个是我们一直学生还有包括学生家长一直在跟校方反映的问题，但是就是说这个短学期真的是，哎呀，给学生造造成了很大的压力，就是因为我们也去读课，就是体验了下 14 周的这样的一学期嘛就是，尤其是对于一些像数学呀统计啊这些课程就是七周，其实等于说是把人家 14 周的东西压缩进 7 周来讲，就是非常紧张。反正 7 周课程也有一个很大的问题就是说，嗯，其实他时间这么短，然后整个造成这个课程衔接性上就是不是很好，就整个课程显得*

就很散不成体系，然后有一些老师就是针对这个问题，他们也会就是在课上，再加就是重复的内容，就导致会上很多重复的课，然后，就是浪费一些时间吧。

Susan also summarized what the pain points are, "too rushed, too fast", the things are not deep enough, not systematic just scratching the surface. She underscored that teachers also sense that a seven-week block is too rushed. In her final assertion, it needs to largely be revamped.

Susan: I feel that I have heard many classmates around me complaining about this seven-week block. They feel that especially after experiencing the normal 14-week system like at Duke University, the seven-week block seems too rushed. Firstly, the students bear a heavy burden, feeling like there is a middle term and a final exam every one or two weeks, and the depth of learning is insufficient. Although I don't dislike the seven-week system as much, I do see its drawbacks. The seven-week block needs improvement; although it is a new feature and a characteristic of DKU, I do think that the mentioned drawbacks exist, such as being too rushed and not delving deep enough into the subject matter. *我觉得我其实听到周围很多同学，就是一直以来都在抱怨这个 7 周制，就是觉得尤其是在去过杜克他们那种正常的 14 周制的嗯学制之后，会觉得七周制有点太急了太快了。一是学生负担很重，就是感觉每隔一两周就会有一个 middle-term，就会有一个 final，然后，你学的东西不够深。嗯，我虽然没有那么讨厌七周制，但是我确实觉得七周制的缺点，7 周制是需要改进就是它虽然是一个很新的特点并且是一个 DKU 的特点，但是我确实觉得它上述的缺点是存在的，就是太急了，然后学的东西不够深。*

Alice and Ximo are the two participants who have no negative attitude toward this block semester system. Alice voiced that she adapted well to this system, but elsewhere, she also voiced that one of her merits was working under pressure and she admitted such quality was shaped by this seven-week block.

Alice: One of my other skills is pressure resistance. This is quite related to the characteristic of our school's seven-week system, where the workload or assignments can be quite tight, yes, it's like that. Because the classes are scheduled more densely and packed, it may require you to make timely adjustments. *因为就是这跟我们学校特色的七周相当有关系，相当于你的就是作业或者是一些作业多，会挤的比较紧，对，相当于这样子，而且因为他的课也排的更密集一点，更满一点，所以说，可能更需要你去及时的做一些调整，这样子。*

Small Classes

Generally, all participants agreed that small classes benefit their learning and appreciated the design of the small classes. From the researcher's observation, DKU's campus design facilitates in-depth discussion for students as the team rooms which incorporate 4-15 students are permeated. In residential areas, team rooms are installed and equipped. One major course setting is that students sit in a circle with the professor as one of them. Rachel first admitted that small classes improved her skill sets as they provided an opportunity for each one to engage in the class. "You can speak up where you want to, and the relationships between you and your classmates are closer, whether it's through collaboration or through the work you do, your connection with them is closer…"*就是你可以,就是在你想发言的地方发言，然后，还有包括你和同学之间的关系是更紧密的，就包括无论你是跟他们合作也好，还是包括就其实你通过你做的进这种事情，就是你跟他们 connection 就更近 。。。*

Rachel also mentioned that small classes can facilitate teachers to observe and interact with students, she pointed out one interesting and nuanced anecdote:

Rachel: For example, when a teacher asks a question and no one in the class speaks up, but one student may furrow their brow or glance around, or maybe even smile at the

teacher, the teacher may then call on that student and ask, "Do you have an opinion on this?" Indeed, that student does have an opinion. *比如说老师在问某一个问题的时候，全班没有同学发言，但是有一个同学可能他皱了下眉，或者就是眼珠子一转，或者就是对老师笑了一下，然后老师就会 cue 到你说: 这个同学你是不是有什么观点，可能就是确实，这个同学就是他确实有观点。*

Alice endorsed that the small classes can support students to have more resources and teachers' effort for each individual will be more. "I think for sure, in a small class, first of all, you will have access to more resources, including more attention from the teacher. And it's like, you can easily send an email or request to meet offline."*我觉得肯定吧，就是小班，首先你获得的资源就会更多，包括老师对你的精力肯定也会更多，然后就是相当于，啊，你随便写封邮件或者是要求线下见一面都是可以做到的。*

Susan reflected that her high school was a small class environment and she described the logic behind small class: "Because there are fewer people, everyone may feel more like a gathering of friends. The atmosphere is more relaxed and casual, making it easier for you to absorb and understand the knowledge." *因为人少的话，大家可能更多的就像一个朋友聚会一样。嗯，氛围会比较悠闲一点，会轻松一些，然后你就更容易的去吸收接纳这些知识。*

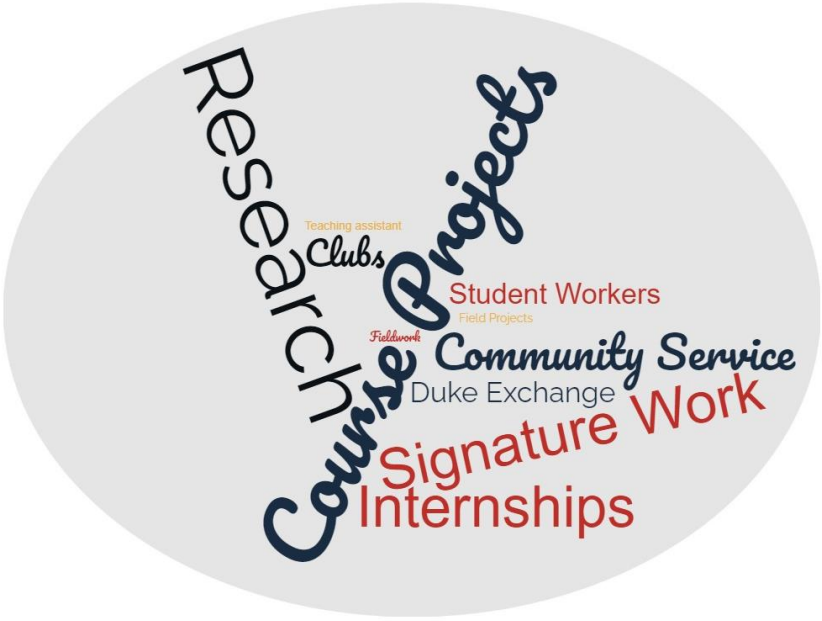
Critically, the small classes are varied according to the majors; science majors might not be that small. Both Ximo and Yana who majored in data science stated such an argument. Ximo reflected that the class size for data science is not that small, however, higher-level courses were of smaller class sizes *高阶课程体量小*, allowing easier communication with the teacher.

Artifacts and Resources Addressing Projects-based and Team-embedded Learning

This theme encompasses the artifacts and resources that DKU provides for its students including academic projects, research, internships, clubs and associations, teaching assistants, field projects, Duke in exchange, etc. Such sources present unique characteristics as the team-embedded collaboration spreads over a wide range of grades and majors at DKU. Figure 4.2. leverages a word cloud to map out the significance of these variables reflected by the font size.

The font size was calculated based on the frequency of these resources in students' experiences. For instance, course projects are given the largest weight as each course has at least one project and students need to take credits over 120 for their graduation; research incorporates multiple sorts such as regular research assistance, summer scholar program, lab assistance, etc., allowing this item to be the second largest weight compared to course projects. Additionally, the other items in this map such as student workers, internships, community services, etc., are roughly calculated based on the frequency of students' mentioning in this research.

Figure 4.2. A Word Cloud of DKU's Resources



Course Projects

Course projects are significant in students' learning as participants described the benefits of these courses. Alice mentioned that through course projects, she learned to be a leader as she witnessed how the upper students performed as leaders, and she moved to be a leader when she was in her junior and senior courses.

> Alice: Previously, in biology, there was a group assignment where my group consisted of three or four students and everyone except me was a freshman. The project required knowledge from the second and third years, and they had no idea how to proceed. So, I helped them find templates and provided some guidance. This aspect was quite evident. *就之前生物吧，有一次作业的时候啊就是我们组是三个人还是四个人，就除了我以外都是大一，当时那个项目的还有一点就是需要可能用到大二大三学的东西，那么就完全就不知道该怎么做，对，然后我就去帮他们找模板，或者是进行一些指导这样子，这方面还是体现地很明显。*

Susan illustrated that a typical situation for cultivating students' teamwork ability is course projects.

> Susan: I think the most common form is to form groups in a previous class where the teacher has group requirements. Then, either the teacher assigns groups or students find classmates to form groups. Next, according to the specific requirements of the course, the group works together. Most of the time, I believe everyone sits down together to discuss, and assign tasks, each person does their part, and there may be several rounds of integration discussions in the middle. Finally, a result is produced. *我觉得最常见的形式就是上一门课，然后老师会有这个 group 的要求，然后接下来就是，要么就是老师主动给大家分组，要么就是自己去找同学来分组，然后接下来就是按照具体课程的要求来进行*

group，但是大多数时候我觉得应该都是,嗯，大家先坐下一起讨论，然后分工,各自其职，中间可能在反复经过几次的整合讨论那之类的,最后出来一个成果。

Leadership and communication were echoed in Rachel's interview.

Rachel: At DKU, in each class, there are many small group collaborations, including peer reviews and team projects. You need to collaborate with many different people who may come from different countries and backgrounds, have different majors, and interesting stories. When you communicate with them, interesting perspectives collide. In these collaborations, it's not always smooth sailing; you may encounter issues like free-riders, cultural conflicts, or other challenges. It's a good exercise to learn how to solve conflicts and handle problems. *就是昆杜这边其实每节课都有很多小组合作，可能包括像有 peer review 然后包括有一些就是 team projects，然后你需要和就是很多不同的人去合作，他可能你接触到的人也是来自不同的国家不同的背景，他们是不同的专业，然后他们有一些自己很有意思故事，所以就是你跟他们在交流的时候,会产生很有意思的观点碰撞，包括在这个，因为其实小组合作也不可能是一帆风顺的嘛,就是其中你会遇到很多像 free-rider 啊或者就是其他出差的情况，可能有这个 culture conflict 或者其他的，就是你怎么去解决这种 conflict 的，然后其实也是对于你处理冲突，然后处理问题的一种很好的一种锻炼。*

Rachel also mentioned how to solve team conflicts in collaboration, which offered an in-depth insight into such complicated collaboration.

Rachel: At that time, our group had a bit of conflict because the four of us came up with three different solutions. Each person believed their solution was the best, leading to a deadlock. To resolve this, we held another group meeting where each person presented a brief overview of their solution, highlighting its strengths and weaknesses. We listed everything out and openly discussed it. In the end, we were able to come up with a

solution that was the most suitable or perhaps the best. *当时我们小组之内的其实就起了一点冲突，就是我们四个人最后提出了三份不同的解决方案，然后每个人都觉得自己的解决方案是最好的，然后大家会僵持不下，然后整个这件事情，最后是怎么处理的呢，其实就是我们就是就又开了一个小组会议，然后每个人就上来做一个类似简单的 pre，然后说我这个方案有什么好，有什么不好。然后大家就把这东西就列出来，就是放在明面上来谈，然后最后我们确实定出来一份最适合的，也可能是最好的。*

Ximo mentioned that he learned the logic of flexibly handling challenges via learning through failure by accomplishing course projects.

Ximo: For a particular online course assignment and another course taught by the same professor, the workload for all projects was particularly heavy. As a data science student without a deep background in computer science, I found myself lacking in some tools related to CS. Spending a significant amount of time exploring and thoroughly understanding everything during these projects would be time-consuming, especially when unexpected bugs arise. This could lead to missing deadlines. Reflecting on this, I realized a better approach would be to have a basic understanding of tools like a package, know how to use it, and then apply it without necessarily delving deep into its operational logic. The key is to get things done first and then refine them. *有一个网络课程的作业，还有另外一门课，但也是这个老师教的，但是他的所有的项目的任务量特别大，而且我作为 data science 的同学，我并没有很深的这个 cs 的背景，然后对他们一些这个跟 cs 有关的一些工具啊，然后可能稍微有点欠缺。那么如果在做这些项目的时候就花大量的时间去探索，所有的东西都了解很透彻，一定是会花大量的时间的，特别是突然有一个这个 bug 出现的时候，有可能就来不及去把这个 bug 给他修理好，结果我就过 due。实际上，我后来*

想一个正确做法，其实就是应该对它，比如说是掉一个包，就对这个包怎么用法有一个基础的了解，就把它拿来用，并不需要一定去搞清楚他背后到底什么运行逻辑，先完成，再完善。

Also, through these course projects, Ximo gained a strong sense of fulfillment. The sense of fulfillment could be salient perceived in his narration during the interview.

Ximo: I really, really like this approach. The assignments in the two courses we are currently taking are the most interesting assignments I have ever done. The assignments in the entire course are interconnected through several projects, with each project being closely related to the next. It's like gradually moving forward and working on a very large project from start to finish. By the end, we create a product related to network, such as developing a small software related to networks, which gives us a clear understanding of the entire process.*我觉得这是我特别特别喜欢，像我们现在上的这两门课，他的作业真的是我做的所有作业里面最最有意思的作业。他们整个这一节课都是以几个项目串联在一起，但这项目中间又是息息相关的，就是慢慢往前，就相当于是做了一个非常大的项目，把它从头到尾全部都做了一遍，相当于我们最后这个成品做出来就对整个这个就说network，做一个跟网络有关的小软件就是有一个非常清晰的了解，就整流程。*

Research

In addition to course projects, DKU students could engage in various research projects outside class, being research assistants for professors, selecting independent study courses, participating in summer research scholar programs, etc.

Susan reflected on her research journal and mentioned that she accomplished two in-depth research projects with each one lasting at least more than half one year,

Susan: The first research assistant position, I should have been a sophomore at that time. Because I am not a very proactive person, but seeing my classmates around me enriching their resumes, I felt a bit anxious. So, I started inquiring about research assistant opportunities everywhere. I heard from a professor that there was a research assistant position available with a certain professor, so I emailed the professor to ask if the position was still open. That's how I got my first research assistant position. The second and third positions came more smoothly as I learned to search for professors and projects that I felt were a good fit for me. That's how it went. *第一个 research assistant，我那个时候应该是大二，嗯，因为我不是一个很主动的人，但是看到周围的同学都在做这些再充实自己的履历，所以有点着急，然后我就到处打听 research assistant 的机会。然后我就听到一个教授说某某教授那里有，现在有这么一个 research assistant，然后我就发邮件问那个教授还有没这个 position，然后这这个就是第一个 research assistant 获得的来由。然后第二个第三个就很顺利成长了就是去寻找对，找自己觉得比较契合的教授，然后项目，对，就是这样。*

Through exploring different research topics, Yana found her own track. She said that in freshman year, she worked as a research assistant in an area of the regional block, but discontinued her work midway due to a lack of interest. Afterward, she went to the research in the medical image which later came to be her final signature work. Another participant Alice mentioned that she participated in two research during her freshman year to gain basic skills like interviewing, write-up, coding, and analysis.

Signature work, the graduation thesis, is what DKU students must accomplish for their graduation. Based on DKU's curriculum design, such a project could start in the sophomore year and be straddled for two or three years. It could be either from a past research project or a new

one. The signature work at DKU presents characteristics of rigor and high demand. Yana's words revealed this demanding attribute.

> Yana: The challenging part is that some professors have high expectations. For instance, in our field, some professors require the completion of a signature work similar to a master's thesis and expect students to innovate and create something unique. However, innovation can be very challenging for undergraduate students. *难点的地方就是有些教授的要求会有一些高，我知道的就是有我们专业，有教授那个 signature work 完成，像完成了什么硕士论文，他会要求你去创新，去做出一些不一样的东西，但是问题是本科生创新太难。*

Alice was proud that signature work is far more complicated and demanding compared to the projects that student in many Chinese universities accomplish.

> Alice: I think a good example is the signature work. From what I understand, many universities in China may have a more theoretical approach, where students mainly discuss and comment on previous works without practical implementation. However, our approach is different. We are required to conduct experiments, collect real data, analyze it, and invest resources to bring our projects to life. It's completely different from what they might imagine a thesis to be. When I try to explain this to them, they may question if we feel pressured, as they see it as something less rigorous. They simply do not understand the unique process and requirements of our graduation projects. *我觉得很好例子就是 signature work，就是据我了解吧，就是国内的很多大学就是很水，对的就是完全就是纸上谈兵，嗯就是完全就是对前人作品的评论就是水一水结束了，那我们就完全就不一样，就是我真的去要去把这个实验弄出来，要去收集真实的数据，要去分析，要去花钱，就完全就跟他们就是他们想象的毕业论文就是完全不一样。我就想跟他们说说，他们*

就觉得你有那么大压力吗？这不就是水下的事情吗？这么好水的东西。就他们完全不了解，就是我们是怎么去做这样一个毕业项目的，就是完全不一样。

Yana also pointed out that most students would take signature works to increase their qualifications for graduate application. Her opinion was underscored by Rachel.

Rachel: On a broader scale, when I was selecting a topic for my project, I had already decided to switch to business studies. Therefore, I wanted to choose a topic that was more relevant to my classes. This way, whether it's for the writing sample or for future interviews with graduate school admissions officers, I would have more substance to discuss. *是比较大范围上来讲是因为我其实在选题的时候，当时已经确定要转商科了，所以我就是要去选一个和上课更贴切的一点题一点的题目。然后这样的话会就是无论是做这个 writing sample 啊，还是就是到时候去和研究生院的这些面试官去聊的时候会更有东西一点啊。*

Generally, the research opportunities might be different based on the subjects. For instance, science research chances are limited and competitive. Rachel voiced that she had heard a lot that it was unreliable, they followed the advisor for half a year and were dismissed suddenly. She uttered that there exists a kind of competition in field research, and she pointed out professors might profit from the lab to attract students to get research assistants or mentees.

Rachel: It does sound challenging. The professor having their own lab with TA (Teaching Assistant) and RA (Research Assistant) positions, along with signature projects and mentees, creates a competitive environment akin to nurturing talents. The professor may recruit many individuals into their lab, but to become an RA or mentee, one must compete and go through screening processes. It seems odd that each year, individuals from the lab tend to leave on their own accord. For instance, in the first week of

meetings, there are two branches in the lab-one focused on papers and the other on coding, and you mentioned that everyone from the coding side left. *那个确实有点难受的点就是，他(a professor)有一个自己的 lab，就是正常学校会有 ta 和 ra 吗， 还有 signature 和 mentee，然后它就属于一种竞争制，它有点像养蛊，就是他会招很多很多人进他的 lab，但是如果你要想成为他的 ra 或者是 mentee 的话，你要竞争，然后他一层一层再筛下来，然后觉得就很奇怪，就是然后就是每年就是反正大概就是他那个 lab 人会自己走掉，就是开会第一周，他那个 lab 有两个分支，一个是那种 paper，一个是那种代码，然后我就知道代码那边的人全跑掉了。*

Internships

Internships are also key areas of practice. Students' internships could be divided into two sorts: internal internships mainly provided by DKU and external internships. Susan mentioned that she had two external internships around the media and her responsibility of classifying interview scripts and proofreading. In her words, she finished these internships well. "During my internship, the teachers or supervisors who guided me often recognized my ability to work. I believe that I did not cause trouble for the team and I diligently completed my tasks." *包括我在实习的时候，其实，就是带我的老师或者说领导，也经常就是对这种工作的能力表示认可。我觉得我至少没有给团队添麻烦，并且也很尽职的完成了自己的工作。*

Yana mentioned that she had two internal internships provided by DKU. One was for the DKU library which she found she did not like that work, and the second one was the coordinator for CSCC, where she could increase her communication ability.

Yana: In that case, we would have regular meetings to plan some columns for the WeChat public account. We would then interview professors and students, and write the entire article. This was slightly more interesting. It included interviews, which I believe

helped me develop my speaking skills and communication abilities, including how to email professors. *那个的话就是它会定期开会，然后策划一些微信公众号的专栏，然后再去采访教授，采访学生，然后再写整理推文，这个就是稍微有意思点。就是包括一些采访了，其实我觉得还是可以锻炼到一些口条，包括那个 communication 一些技能，包括你就是怎么邮件联系教授。*

Ximo's internships focused on the internal opportunities provided by DKU, he worked as a student worker at China Enrollment Office where he answered inquiries, led campus tours, trained new members, and had a deep interaction with future students.

Ximo: So, in other areas, I can say that I worked as a student worker, participating in various departments' student work. In these roles, we gained a clear understanding of processes such as how the admissions office recruits students. We faced various challenges in student work, such as conducting campus tours, memorizing the script, and communicating effectively with new parents and students. *那我这其他方面的实习就可以说是 student worker 吧，也是在各个部门去参与了一下他们这个学生工作。啊，在这些工作中，我们对于这些，比如说招办的这些，它怎么样去招生，这整个这个流程有一个比较清晰的了解，然后在我们做学生工作中也是有各种各样的挑战，就说带 campus tour，要把这本稿子背好，怎么样子去跟新来的家长和同学们沟通。*

Clubs and Associations

Clubs, associations, and activities are the main areas that students experience. Rachel narrated how she came to start a Taichi Club.

Rachel: There were two other aspects at that time. I was taking Taichi and Taichi Sword classes, both taught by different instructors. The physical education teacher reached out to me with an idea to start a club. Since I was already taking these classes and found the

idea interesting, I decided to join. From a more practical perspective, I also needed some club experience, as it would be beneficial for my future academic pursuits.*两个方面,当时第一是我在上太极和太极剑，然后都是一个老师教的，然后这个体育老师当时是 reach out 我说他有这么一个想法然后去创这么一个社团。当时因为我也在上这个课嘛，我也觉得这个事情还挺有意思的，然后加上，从一个功利一点的角度考量是，我确实需要一段社团经历啊，因为这样的话其实对于升研是更有帮助的。*

Yana also described the value that clubs could assist students in development. "As it is a new university, including your clubs, you had to essentially establish them yourself and submit the constitution. I think this actually forced DKU students to take on some leadership roles."*因为它是一个新的学校，所以就是包括你的社团啊一些都是就是，相当于你要去自己去建立，然后去投那个章程，然后我觉得这个其实也是说就是强迫昆杜学生去做一些 leadership 的一些事情。*

Although she was deeply committed to some club activities such as the Big Tree Volunteer Association, Yana voiced that these clubs produced little value: "My experiences mainly focused on my freshman and sophomore years because I later realized they didn't seem to have much utility compared to academic achievements or tangible outcomes." *我这些经历可能主要集中在大一大二，因为大二之后发现它们好像没有什么用，比起那种学术，或者是你有一个很明确的成果类的，这种就是它们的作用就会小一点。*The finding might reveal that some DKU students are concerned with utilitarian purposes. Although they are members of the DKU community, it does not mean that all of them know the essence of liberal arts education and they are confident in DKU's education. Subject to the macro-environment of careerism in China, some students also embrace a practical attitude toward education.

Teaching Assistant

Ximo was mostly impressed by his teaching assistant work with a media arts professor as he explored and made a great effort to initiate a new syllabus.

Ximo: I am deeply impressed by a previous experience where Professor T invited me to be a teaching assistant for her Media Arts class. This course had never been offered before, and I had not taken it either. I didn't have much knowledge about web design either, so I only had a little understanding. Throughout the process, the professor provided a long list of readings. I was able to find and upload some related resources to the Sakai system, but for some resources I couldn't find, that required special permissions. I sent the list to the librarian, who then searched various libraries to scan and upload the reading materials, providing me with the links. Students would ask me various questions related to web design, and I would typically spend a lot of time searching, sometimes up to two hours, before thinking about how to explain things to them. I would then email them my understanding or discuss it during office hours, preparing in advance to explain things clearly and quickly provide solutions to the students. *我印象非常深刻是我之前，T 教授，她邀请我去当他的一个 Media arts 这课 TA，但这门课是以前从来都没有开设过，我也没有上过，我对于做网页也并没有很多了解，然后我们就只是能说一点点的了解，我去，在整个过程中，比如说，老师列了一堆这个阅读的清单，那么有些，我可以去帮他找到把这个相关资源放到那个 Saki 里面，但有一些资源我没找到，它可能是需要一些特殊的权限，我就把清单发给图书管理员，他就去找各个图书馆去最终把这些阅读材料扫描好，放到这个资源链接，放到这个图书馆里面，然后把链接再提供给我。然后包括同学们会问我各种各样的问题，跟制作网页相关的，然后我通常都会花大量的时间先去搜索，可能要搜比如说两个小时，然后再怎么样子去思考，把整个这个，我理解到的东西通*

过邮件发给他，或者说在 office hour 上面，我提前先过一遍，怎么样去把整个事情讲清楚，然后再在 office hour 很快去把我的解决方案去告诉这个同学。

Field Projects

Rachel is the only participant in this research who engages in the field project that DKU collaborates with corporation partners, which is the University-Corporation Innovation Lab (U-Corp) by the Department of DKU Innovation and Entrepreneurship Initiative (IEI). This opportunity is relatively limited. Rachel mentioned that she worked with partners from DKU and a corporation for the perfume market. As her team consisted of DKU students in different grades and majors, this project involved a high level of communication skills with diverse stakeholders. For instance, she mentioned that there was a conflict about interview structure, the partner at DKU IEI expected them to use a nonstructured interview, yet, her team eventually decided to utilize a semi-structured interview format after considering the feasibility of the interview and data analysis, the final decision was implemented after they persuaded the partner at DKU IEI.

As for the final presentation, the CEO of the Hong Kong Office of this corporation attended their presentation. "The progress went quite smoothly. In the end, we created a PowerPoint presentation of around 20 pages. We presented it via Zoom to the CEO of Meiyumei (a French company), who I believe was from a branch in the Greater China region, possibly in Hong Kong." *进展蛮顺利的，我们最后是做了一个大概 20 多页的 ppt 吧，然后当时是，就是 zoom，present 给美玉美 好像大中华区就是香港那边的一个分部好像，对, CEO。*

Exchange at Duke University

Exchange at Duke University is a chance that every student could choose to have or not. According to the policy of DKU, junior students could have a one-semester exchange at Duke University in the U.S. All five participants experienced their exchange at Duke University. Alice,

Yana, and Susan were impressed by the courses they selected at Duke University, which scaffolded them to have a distinctive learning experience by allowing them either to have a different class atmosphere, or to enjoy a big class, or to have innovative content. Ximo experienced close interaction opportunities with foreign students as he shared a dorm with foreign students, he drew lessons on how to interact with them through daily communication

> Ximo: It's completely understandable to feel nervous when first interacting with students from different countries, especially if you haven't had much experience with international students before. The pandemic may have exacerbated these feelings, as many international students were unable to return to campus. When you first arrived at Duke and had to live with American students for a semester, it was a mix of nervousness and anticipation. However, these experiences can be incredibly valuable in building confidence and preparing you to navigate a globalized society. Interacting with students from different countries allows you to gain diverse experiences and learn how to communicate effectively across cultural differences. For example, American students may greet you with "what is up," and understanding how to respond to such greetings is part of the learning process in cross-cultural communication. *我觉得嗯如果你是单纯的一个中国人，没有跟外国人打交道，那当你第一次像我刚去杜克的时候，其实还是非常紧张，因为疫情嘛，他们国际生都没回来。然后我第一次去 Duke，要想着要去跟几个美国同学就住在一个房间，呆那么一个学期，非常忐忑，有点紧张，有一点期待，但是还是紧张居多，就是我觉得有这样的机会去跟不同国家的同学打交道的话就可以让大家更加有自信去面对面对这个国际化的社会。在跟大家打交道时候，会积累各种各样的经验，像美国同学，他可能上来，就会说 what is up，然后你怎么样子去回答这些东西，也是需要在这个交流中间去逐步了解。"*

Alice got immersive exposure to diverse cultures through her sailboat in the U.S. as she completed a sailing with foreign students.

Alice: But like in the summer, almost everyone had left. At that time, I still had the chance to meet many other international students. For example, during spring break, I went sailing for seven days at sea. Throughout that journey, we had students from India, Pakistan, China, the United States, and American-born Chinese. During that time, it felt like it forced me to communicate with them because I'm actually quite lazy and tend to stay in my comfort zone. However, during that period, since we were together 24/7, it really pushed me to interact with them and understand their cultures. *但是像在夏天的时候大家都都走了差不多了嘛。那时候还会有遇到很多其他国家同学，那包括我在我在春假的时候，是去海上，就是帆船航行了七天嘛，一直在海上，在然后那地方的话，就那个过程当中，基本上就是我们有印度的，有巴基斯坦的，中国的，有美国本土，有 ABC，对，然后就是那段时间的话，就是感觉就是迫使我去跟他们交流，就是因为我本人其实很懒，然后也很想呆在自己得舒适圈里的。然后那段时间的话就是，因为大家 24 小时天天都待在一起嘛，所以说还是就是促进我去跟他们交流，去了解他们的文化。*

Yana had an incredible life at Duke University as she was deeply engaged in the multifaceted sports events there.

Yana: I feel like the happiest time of the four years was when I truly experienced the feeling of enjoying both learning and living. Because there were more activities at Duke, we even went to see some performances by East Asian students. And there were basketball games; the funniest part was that we went to watch them for four consecutive games, every week, which was a bit crazy. *我感觉就是四年最快乐的时候，就是就真的感受到了，就是说可以学习和生活两个都在享受生活的那种感觉，因为杜克那边的活动会更*

多，包括在那边，我们还去看了那种东亚的学生的一些表演，然后包括篮球赛，篮球赛当时最好笑的时候是当时好像连续四场，就是每周都去看，周周都看，对，就有点恐怖了。

Diverse challenges were handled alongside this experience. Solitude is the feeling that Rachel sensed during her time abroad at Duke University, "But one feeling that I find very profound is the sense of loneliness inside". *但是有个感觉让我觉得非常深刻的就是在里面真的孤独。*Another feeling of isolation is from Susan. She felt a strong sense of isolation and voiced it was not physically or purposefully caused by others, but by her own status of mindset - she felt it was hard to explain her feeling as such isolation was not caused by being externally excluded by the community but by her own sense. She explained that such feelings were mainly because she was in another country which was different to the country (China) where she was the host.

Susan: I feel that because I am in a foreign land, even though classes are conducted in English and there are many foreign students and teachers around me, I still feel like I am in a world where I am the outsider. I feel like I am a foreigner.*我觉得就是因为异国他乡，因为在这个地方，虽然大家也说也用英语上课，周围有很多就是外国学生外国老师，但是我会觉得我是处在一个我是主体的世界里面.. 我是个外来者.*

After returning to DKU, Susan had a discussion with professors at DKU and they shared the same feelings with her during their first year of study abroad, Susan believed that the experience at Duke University permitted her to be familiar with such isolation and she feels no more fear in particular, as she will go for graduate study in the U.S.

Responsive Teacher-Student Relationships

This theme incorporates three categories of relationships, they are professor-student relationship, student-student relationship, and staff-student relationship. Commonly, the

professor-student and staff-student relationships are mainly what the teacher-student relationships contain. In this research, the researcher put student-student relationship into this category as in Chinese culture, there exists a conventional belief that people generally learn from others who are better. Such an idea could be crystallized in the proverb: when I walk along with two others, they may serve me as my teachers. *三人行必有我师* (translated by James Legge).

Professor-Student Relationship

DKU advocates student-centered learning (DKU, n.d.; Wu & Zhou, 2020). Professors play extensive and profound roles in students' learning and life, such as being advisors for freshmen, course instructors, research mentors, friends and colleagues in diverse clubs or events, signature work supervisors, mentors of the pathway to success mentors, etc. In this research, three sorts of relationships are identified.

Role-Model

In the Chinese culture, the teacher's role not only extends beyond the transmission of knowledge but also as a role model who could impact. To many students and families, the qualities of professors and their moral standards are paramount. The direct feedback from participants could elaborate on this point well. Susan mentioned that she was impressed by her supervisor's working methods.

> Susan: I really like and respect my supervisor. I have worked with him on some research assistant projects before. I think he is relatively young, only in his thirties. However, I find his guidance to be very professional and timely. He is also a well-organized person. For example, some supervisors may have a guidance style where they meet with you at the beginning of the semester to outline a general plan and only ask for your work at the

end of the semester. This approach may leave students feeling disorganized, making it difficult to adjust to any changes that may arise. In contrast, my supervisor meets with me every week. *我很喜欢也很尊敬我的这位导师。嗯，然后，包括我有一些 research assistant 的项目之前其实也是跟着他做的。我觉得他比较年轻了，其实也才 30 多岁。然后，但是他的指导真的我觉得很专业，也很及时。包括他也是一个很有规划的人，比如说有一些导师，他的指导模式可能是：我们学期开始的时候我们见一下给你立一个大概的计划，那可能学期末的时候，我才会跟你说把你写的东西交上，这样就学生可能就很没有规划，包括目前，包括中间，如果有些变动的话也很难调整。但是我这个导师是我们每周都会见。*

Such impression was also echoed in Rachel's narration as she was impressed by her supervisor's work ethics and felt greatly benefited from the interaction with him.

Rachel: My professor, who is also my supervisor for my signature work, actually has a very different style compared to many other students I know. I chose him because I value this aspect of his personality. He is a very dedicated person who works 14 hours a day consistently. Despite his intense work ethic, he is very organized. He always ensures that everything is completed before the deadline, which can be a bit pushy, but I quite like the structured and planned approach he provides. *我的教授我这个 signature work 的教授啊，其实和其他我了解了很多同学风格不大一样对，就是我其实当时选择这个教授，也是因为看重他这点，就是他其实是一个非常非常卷的人，他每天工作 14 个小时啊，就常年这个样子，然后，但他做事非常有条理，就是他一定会确定你在这个整个 deadline 之前把所有事情都完成了，就是有点 push，但是我还蛮喜欢这种有条理有规划的感觉.*

Rachel even furthered that such a relationship did not exist in other places.

Rachel: Anyway, because my mom is currently pursuing her Ph.D., when I told her that I meet with my supervisor every week, she was very surprised. She mentioned that in her

Ph.D. program, she doesn't get to meet with her professors once a week, and she expressed envy towards my lifestyle in this aspect. *就是反正怎么说因为我妈现在也在读博嘛，然后我跟她说我每周都要跟我导师见，她又表示非常的震惊，就是她说就是她现在读博，一周都不能跟教师见一次，然后所以她非常羡慕我这样的生活。*

Yana mentioned that such a relationship might be based on individuals and can be distinctive between disciplines. For example, she mentioned that her signature work supervisor did not put their emphasis on the undergraduate students (and under such conditions, she managed to survive her signature work through her effort). She also pointed out that in some areas, like economics, students' research topics were designated by professors, which she voiced would save the enormous effort of struggling by themselves. In general, not every student at DKU may experience the role model effect of professors.

Supportive Relationship

The supportive relationship is regarded as the fundament of the professor-student relationship. All five participants poured positive comments on their professors. Ximo mentioned "I have never encountered a professor who shows even a slight hint of impatience when I ask them questions. They are always very patient and understanding."*我现在就没有碰到有任何一个教授他就是在你问他问题时，他有略微有一点点不耐烦那种感觉出现，就从来没有感受，他们非常非常有耐心。*

Although Alice's primary help sources are not from professors, she appreciated DKU professors' care and devoted support.

Alice: At DKU, my professors always tell me not to be afraid of bothering him and to come to him whenever I have questions. They emphasize that they are responsible for my learning and that I should seek their help. My classmates are also very friendly, so I feel

that I should make every effort to seek help from others whenever I encounter any problems. *昆杜会一直收到你老师说你不要怕麻烦来找我，你就应该来找我，我对你的课程学习负责，你就应该来问我，然后同学的话也是很很友善的，所以我觉得这话也是让我觉得就是你遇到什么问题，就应该尽力去找人去帮助你。*

Rachel underscored the benefit of office hours that students could know how to approach professors when they had problems. Also, she mentioned there was an open DKU directory so that students could search and send emails to professors. She guaranteed that the replies would be landed soon. In addition, she described the support relationship as a "responsive one".

Rachel: At DKU, there are many activities like "Dinner with Dean", where there are sponsorships that might provide you with a $30 meal voucher to have lunch with your professor. These activities aim to strengthen the connection between students and faculty, allowing you to discuss things beyond academics. The main focus is on being responsive and helpful whenever needed. *还有像 DKU 有很多像什么 dinner with dean 啊，包括会出有我记得一些原来是有 sponsor 就是说可能给你 30 块钱餐券，然后你可以约你的教授中午一块吃午饭，就这样的活动。就是呃，就是拉近了这个师生之间的 connection，就是你可以跟他聊很多课业之外的东西，然后对，然后主要就其实就是主打一个就是有求必应。*

Yana expressed that such a supportive relationship incorporates true equity and kindness, she felt relaxed to approach professors as she understood professors are truly there for her.

Yana: When it comes to contacting professors, there are not many concerns at DKU. Some students may worry about potential social obligations or whether the professor will be annoyed or angry if approached outside of class. I know that some professors in China may not like students approaching them after class, but I feel that at DKU, it is quite good in this aspect. You can directly contact teachers if you have any questions, and professors

are willing to provide help within their capacity. The relationship with professors doesn't feel as tense, and there is less of a gap, so students feel comfortable approaching professors for a chat. *嗯，就是跟教授联系起来没有特别多的就是一些顾虑，比如说你要不要跟你到时候有些什么人情往来，就是会考虑很多，比如说他会不会，就是比较反感，或者是生气，因为有些我知道的就有些国内教授不太喜欢学生，就是说下来课一天的晚去找他，但是我觉得昆杜这方面就是还挺好，就是有什么问题你可以直接去联系教师，教授也很乐意去为你提供一些，就是他能够提供的帮助，然后包括，我们感觉跟教授关系就是没有那么紧张，就是跨度也没那么大就是说，还是蛮敢去找教授聊天。*

Affective Relationship

An intimate relationship far more dedicated than a support relationship could be identified in this study. Professors' affective care toward students happens at DKU. Alice narrated how she was motivated by teachers when attending challenging courses.

Alice: Firstly, the encouragement from my professor was significant. He believed that as long as I was interested, I could try to persevere. Secondly, even though the class was challenging for me and I had to read a lot of literature every day and write on my own, there were moments of breakdown in between. However, during our group presentation where I was in charge of a section, I could clearly see that they were impressed by my work. I felt that after that class, including when the final grades were released, it was a significant encouragement for me. It showed me that I can be brave and pursue things I may not have been familiar with before.*首先是教授给我的鼓励，他觉得只要你感兴趣，你就可以尝试去坚持下来。然后其次的话就是就那节课，虽然真对我来说很难，就是我每天都在啃很多文献，然后自己还得写，然后就中间是很崩溃的，但是最后就是我们小组 presentation 的时候，就是我负责那一块，就明显感觉他们被我惊艳到了，对，然后就是我*

觉得就是那节课之后，包括最后成绩出来，就是对我而言是挺大的一个鼓励，就是你想去做什么，即使你可能之前不熟，但都可以去勇敢去做。

Rachel spoke out that students at DKU could share with professors more than just academic aspects, "you could talk with professors about your life, your career development after all, teachers have experiences, they could offer some suggestions"*你可以去跟他聊你的生活，你可能未来的职业发展，因为毕竟他们是过来人嘛，所以他们会有很多关于这方面上的建议。*

Furthermore, she mentioned that she could share her personal feeling with professors, "sometimes when I communicate with some of my professors, I express my nervousness and fear of graduating and being unemployed." *就像我有时候和我的一些教授去沟通的时候，我跟他说我很紧张，我很怕自己到时候会失业，毕业就失业。*

Student-Student Relationship

In this theme, two subthemes are identified, they are: Influences from High-achieving Students, and Assistance from Other Students. Detailed information is provided below.

Influences from High-achieving Students

The students at DKU present diversity and the mixture of students from different backgrounds does create positive and negative influences. Participants expressed that they were shocked by the high-achieving students' achievements and performance. Yana was shocked to find that a new student had so many experiences prior to his enrollment at DKU.

Yana: Then when I saw the resume of a junior student, it was really terrifying. He was already a founder in high school, and then something else, and then started something, I forgot if he was a director or something, it was really scary, like he had several companies under his name. I remember his resume was really terrifying. *然后当时看到有*

一个学弟的那个简历，真的吓死人了。就是他高中的时候就已经是那种什么创始人，然后又什么，然后就是开始什么，我忘了是董事还是什么就是那个真的很吓死人，就是名下好几个公司那种感觉。就是记得他的那个简历都要吓死人。

Ximo stated that he learned positive qualities from his classmates and roommates. He pointed out that his GPA was improved through his interaction with another student.

Ximo: I feel that in dealing with different people, I also learn from them. Like my previous roommate, he was very refined in life, like a prince. He would make tea, set up some aromatherapy in the dorm, and also enjoy working out. I think, hmm, I learned some things from him, such as some small pleasures in life. *我觉得在跟不同的人打交道过程中间也是从他们身上学到，很多像我之前的室友，他跟生活非常的精致王家龙就是，他会泡泡茶呀，弄一点个什么香薰啊的宿舍，然后也喜欢去健身，我觉得，嗯，从他身上也是学到一些，比如说这个生活的一些小情趣.*

Susan further revealed that high-achieving students are not only a small group at DKU and these students' achievements surpass their peers and fellow students.

Susan: for example, my friend once showed me another classmate's moments on social media. He was trading stocks, from our batch. He could make over 500,000 in a year from stock trading. And, yes, including my own practical internship experiences, they were actually quite ordinary. In our school, you can see students interning at the big four firms during university, and even interning at the United Nations, or leading projects. It's like this and that, when you see it, you might feel a lot of pressure, but later on, you gradually come to terms with it. Everyone has their own path to follow. *比如说我的朋友也给我看过另外一个同学的朋友圈，就是他炒股 跟我们一届，他炒股一年可以赚 50 多万，然后，嗯对，然后包括我这些实践经历的实习经历其实也算真的很普通。在我们学校就是*

你可以见到大学期间就可以去四大实习的，然后也可以去联合国实习，甚至还可以主导项目。就是这样那样的，就是你看到会觉得自己心里压力很大，但是后来慢慢也就释怀了，就是个人有个人的路要走吧。

Assistance from Other Students

DKU peers, upper-level students, and experienced students are helpful in providing assistance to new students. Students could work as peer mentors and tutors. All five participants agreed that they benefit from this practical help or even regard the friendship with classmates prior to the relationship with professors. Alice stated that she took peers' relationships as the priority source for seeking help as she might not be willing to bother professors at first, also, Ximo stressed that he would go for friends and classmates first, and then for professors, which is a natural logic for seeking help. Meanwhile, Susan addressed that this logic makes sense as peers and alumni could serve better to provide more detailed and direct information compared to professors, she said "they (professors) are actually quite far from their student days".*但是他们距离学生时代其实比较远。*

> Susan: Most senior students in school are willing to answer your questions, as long as you have a patient and polite attitude. Even during the process of applying for graduate studies, many senior students actively share their experiences and are willing to help if you want to apply to a particular school or study in a specific place. You can ask them about the situation of that school, and this way you can build a networking connection. *学校里面大部分学长学姐都还是愿意，嗯，去回答你的问题，只要你是一个耐心的礼貌的态度，然后，包括申研的时候，也有很多学长学姐很主动的分享经验，然后也会有自己就是想要申请个学校，比如有学校学习在那边，你可以去问那个学校的情况，就是你会有这么一个 networking。*

Alice mentioned that students, typically senior students at DKU are generally helpful to other ones. Regardless of their location or graduation status, they would provide their utmost assistance to fellow students.

> Alice: Actually, I think one of the great things about our school is that your classmates, especially senior students, are very willing to spontaneously share information with you or answer your questions. They are happy to help and won't find it bothersome. In our major, which is psychology, some senior students are also willing to actively share things on social platforms, so you can get some good references. Also, when it comes to graduate studies, they will organize some materials and tell you about which schools are better for your major, whether in the U.S. or elsewhere, and what the application process or requirements are. They will share all of this with you. So, I think in school, the guides you have are probably more the people I have direct contact with, either teachers or classmates. *包括其实我觉得就是我们学校特别好的地方在于你的同学，然后特别是学长学姐他们会很自发的去告诉你东西，或者你去问他们，他们也很乐意告诉你不会嫌烦这种东西。对，然后我们专业的话，因为心理学专业嘛，就是有些人学长学姐也是很乐意去主动在社交面上分享一些东西的对，所以就可以做一些很好的参考。对，然后包括研究生这一块，他们也会就是整理一些资料然后告诉你，或者是比如说你这个专业，就是美国或是哪里，哪些学校会比较好，这样子然后你可以去申请的流程或者是需要准备的东西，他们都会分享给你，所以我觉得在学校有的引路人的话可能更多的还是跟我有直接接触的，就一个是老师还有就是同学去。*

Rachel addressed DKU's connections including both current students and alumni, stressing the broad DKU community could assist new DKU students.

Rachel: Exactly, one of the great benefits of DKU is the connections it provides. You have a group of people who started from a similar point as you and are heading towards a similar endpoint. You have connections with them, and they are willing to help you because you are a DKU alumni or current students. Even if you haven't collaborated with them before, they are willing to assist you because of your affiliation with the school. In truth, they have a strong appreciation for the school and may feel a sense of gratitude, so they are willing to help you. *对其实就是 DKU 其实另外一件事情就是给我们的一个非常大的好处，就是 connection，就是和你差不多起点，差不多，然后终点也差不多的一群人，就是你跟他们有 connection，然后他们也愿意因为你这个你是 DKU alumni 或者你是你是 DKU，就是在校生，然后他们这些身份去帮你，虽然可能就是你们之间并没有很多交集，你们没有一块合作过，但是因为你是这个学校的，他们对这个学校其实说实话，无论是，就是很认可，或者是有一些感恩之情，他们也会愿意帮你。*

An interesting anecdote shared by Ximo was that he gained generous support from the previous course's teacher assistant who was employed at Google in the US. When he and his friends were exchanged at Duke, he expressed that they took advantage of this gatekeeper's help to arrange a visit to Google's company.

Staff-Student Relationships

Both Ximo and Alice stated that students at DKU could easily have access to high leadership personnel. When talking about what DKU could improve, Ximo mentioned that he had a conversation with the Vice-Chancellor about holding joint activities with traditional Chinese universities and the chancellor sincerely advised them to start with students of those universities. Alice also mentioned that at traditional Chinese universities, there exists a

hierarchy; having conversations with leaders is not an achievable thing. Based on the researcher's work experience at DKU, the researcher found out that the relationship between leadership personnel and students is close, equal, and even considerate. The researcher witnessed that the previous Chancellor Feng argued for one additional quota for one student who hoped to have an exchange opportunity at the National University of Singapore. Chancellor Feng always had meals at the dining halls and students could simply sit with her if they liked and Chancellor Feng was delighted to have conversations with them.

Ximo pointed out that he appreciated that the Dean of the China Enrollment Office at DKU wrote him a postcard, which encouraged him to work diligently for Gaokao.

> Ximo: Also, after the first round, Dean Li sent us a small card with his signature and words of encouragement, including the book *At the DKU*, I often flipped through it, and it really gave me strength during the final stages of the Gaokao. I would read it before going to bed, and it was really inspiring. *那包括我们通过这个第一轮之后，这个李院长给我们发的这个小卡片上面，有这个李院长签名，然后还有鼓励的话，包括这个缘起昆杜那本册子，经常翻，然后真的是在高考的最后阶段给予我力量，真的是睡前翻一遍，真的是非常向往。*

While the general satisfaction rate towards the leadership body is high, the attitude towards staff varies based on individual. Yana claimed that DKU is extremely inefficient and could not solve the students' problems or concerns well. She pointed out that even some students become "rights defenders" *老赖* during their four-year studies as they fight for their rights.

> Yana: It's like everywhere they [students] complain, departments pass the blame to each other, and finally, one person went to housing to complain, but housing didn't tell him where the office was. He said to the housing [department], 'If you don't tell me, I'll

complain to your supervisor. If I can't find you, I'll find the president. I always know where the president is. And there was another incident where they [students] went to a department but couldn't find it. He told me that he just randomly walked into an office and sat there, refusing to leave until they told him. 'If you don't tell me, I'll just sit here." *就是到处投诉，然后互相甩锅，然后最后他们做出有一个人之前去找 housing 投诉，然后 housing 不告诉他办公地址在哪里，他就说，跟 housing 说你这样，我就找你上级投诉，找不到你，我就找找校长，我总知道校长哪里。对，然后还有之前他们去我忘了找什么部门，然后找不到，他跟我说他就随便找了一个办公室进去，就是直接坐在那，不走了，你不告诉我，我就一起坐着。*

Yana stressed that the activities held by the Career Service Department were rigid and useless. "It's just pure training, pure lectures. The training is not interactive, just purely motivational speeches, and it seems like those motivational speeches are not very effective." *就是纯纯培训，纯讲座，就是他的培训也不是说互动式的，就是纯纯的灌鸡汤，然后那个鸡汤也好像也没什么用。*However, Rachel was positive about career service as she appreciated that career service offers a great much assistance to her career. Nonetheless, she admitted that the management problems at DKU were due to the overlap of responsibilities. "Of course, besides the school, there may be departments like operation/student affairs, and there may be some issues of passing the buck between them. It could be due to unclear functional divisions and overlaps." *当然当然了，除了学校可能有几个像 operation/student affairs 之类的这些部门啊，就是之间会存在一些踢皮球的问题，但可能也是确实，因为职能划分不清楚，有 overlap。*

Additionally, concerns about school funds and dining hall foods were raised in some participants' interviews, as the second phase construction of DKU was of low quality, and the food is always difficult to eat and expensive. Rachel mentioned that the primary chief in dining

halls has not been changed during the many times that suppliers were changed. Also, she mentioned that students' reimbursement for research was delayed.

Overall, participants generally appreciated assistance and human care from the leadership authority but had varied views on DKU's staff. The same aspects could be seen differently based on the participants' understandings, leading to conflicting views.

DKU's Authentical and International Context

This theme can be divided into the following four subthemes, DKU addresses real-world challenges, DKU is a competitive environment, DKU offers autonomy, and DKU possesses a global diversity.

Real-World Challenges

The mission statement of DKU is: "Serve Truth and Justice, Serve Societies and Nations" (DKU, n.d.). The characteristics of addressing real-world problems were ironed out as early as the start of this DKU initiative. The purpose of this university is to address future challenges in this world. DKU's teaching and learning uncover real situations. Ximo mentioned that he took a course regarding infectious diseases and could better connect with COVID-19.

> Ximo: For example, in my freshman year, my academic advisor recommended that I take a history course on epidemics. This allowed me to gain a deeper and more comprehensive understanding of the current epidemic by learning about the history of past pandemics such as major flu outbreaks. *比如我们大一的时候，我的 academic advisor 推荐我去上一门关于疫情的一门历史课, 然后这让我对于当时正在发生的这个疫情的历史，像过去的一些大流感等，让我对于当时正在发生这个，这个疫情有了一个更加深刻，更加全面的了解。*

Alice believed that the topic of Brazilian forests led her to have connections with the future setting. In addition to academic knowledge, the research, internships, clubs, etc. are around the real world. Alice mentioned that she drew her signature work topic by observing the taxing behaviors performed by her classmates.

> Alice: At that time, I noticed that while living in the TA building, many of us often rushed to class by taking individual taxis. It struck me how each person would have their own taxi, resulting in a line of taxis parked outside the building. I wondered why everyone was heading to the same destination at the same time for class. Why not carpool? This observation inspired me to consider initiating a carpooling project.*当时我也是看到，就是我们当时那时候还住在 TA 嘛，然后经常有很多赶上课打车走对，但是呢，就经常发现大家一人一辆车，然后底下停满了出租车，一人一辆车，我在想大家竟然都是去那个目的地，对吧？都是这个点时间点上课，你为什么不选择拼车，而且所以每个人打一辆车。对对对，当时也是因为看到这个去想做这个项目。*

What students experience could shape their real-world skills that matter in their academia and life. The DKU community's DNA includes a strong foundation in real-world application, as students tackle real-world challenges and problems.

Competitiveness is everywhere

DKU presents a challenging environment for students, with varying levels of competitiveness that elicit different responses from individuals. Just as discussed in the research, some participants named it as a malicious competition, while others might assume it was a sound and healthy competitive environment. DKU teaching and learning itself creates a challenging atmosphere for students; it is often heard that DKU students have no time to communicate with

their parents. For instance, during the researcher's travel to Shijia Zhuang, the capital of Hebei province, a DKU student's mother mentioned that her daughter was so busy that she could only watch her daughter write assignments during their online conversations. Understandably, the class of 2024 suffered more compared to the first two years of graduates, as professors officially proposed the regulation of control GPA, which was echoed in Yana's statement: "This year, our class has started to focus on GPA, as the professors have explicitly emphasized its importance. *我们这一届开始压 GPA，就是教授明确提出来*。It is purposed to control GPA inflation.

Also, as students plan for overseas studies, they understand the activities and pursue in the direction that better their future development, such as engaging in activities and creating published research and articles. However, the competitive atmosphere drove students to work harder and harder, typically, like students who emphasize their first impression at DKU, would force themselves to speak out their ideas, some of which might be irrelevant in class; also, students are anxious to carry out research as early as possible, being fearful of lacking behind.

> Susan: Certainly, there will always be some students who are very focused on achieving high grades, commonly referred to as "gunners". In my major, the pressure to excel may not be as intense compared to fields like computer science, media studies, or psychology where there are larger numbers of students competing for limited opportunities. However, I can already sense the competitive atmosphere and pressure to perform well. *卷卷肯定是卷卷，肯定就是像我这个专业的话可能还稍微不那么的卷，但是像其他的一些，比如说学计算机传媒心理学的这些专业很大，人有很多，那么相对的机会就会更少就，就会更卷。但是我自己已经可以感受到这种卷的氛围。*

Yana pointed out that DKU's curriculum is the internal drive for such competitiveness as the whole four-year's arrangement is challenging and overwhelming.

Yana: It seems that one major issue at DKU is that the structure of the curriculum in the final year is quite unreasonable. Typically, in most universities, the first three years are focused on coursework, while the fourth year is dedicated to projects, research applications, internships, or thesis work. However, at DKU, the final year is filled with intensive specialized courses alongside the need to prepare for standardized tests like TOEFL and GRE, as well as completing the thesis project. This heavy workload can create a challenging and overwhelming environment for students. *感觉主要是昆杜，有一个安排很不合理，就是他的大四感觉人像永动机，就是正常学校是前三年在上课，大四基本上就是忙毕设，申研，或者是实习，我们的大四又上专业课....然后全是专业课的同时，你还要忙托福、标化考试，托福 GRE 也要考，然后你还要搞毕设，其实一大坨在里面。*

Keeping their GPA is the primary goal of students' major decisions. Rachel mentioned: "While foreign professors may not fully understand this situation, it is indeed crucial for Chinese students to maintain a high GPA in order to secure admission to graduate programs". *虽然国外教授不理解这件事情，但是确实对中国学生来说申研保 GPA 很重要。*Although Dean Marcia advocated that students should learn for fun, it is an unavoidable trend that the majority of students declared a major in the early period of free exploration years (first two years), and most of them would prefer the popular majors, unless they could learn them well.

One challenge brought up by Yana was that the student's over-emphasis on research led to a breakdown of the student's mother as she viciously blamed the supervisor for her children's failure and attracted lots of followers in the DKU parents' WeChat group.

Yana: I understand that it can be difficult when the emphasis in your major, such as data science, is heavily placed on output and results. It can create a lot of pressure for students. It is concerning to hear that some students have faced challenges such as having

their research papers rejected, leading to their parents' criticizing professors in parent groups. This highlights the intense pressure and high expectations placed on students in academic settings....*我那天看到有一个很难受的点，就是因为我们专业（data science）把产出看得太过太过重了，我觉得这也是一个难受的点…我之前看到的是有学生因为论文发表失败，然后家长就在家长群里骂教授。。。*

Yet, participants believe DKU offers their diversified tracks. For instance, Alice was delighted that she would choose to work directly after her undergraduate study; Susan was fortunate to continue her passion and be committed to literature.

Autonomy

Autonomy at DKU is that student's ideas and thoughts can be transmitted to the decision-making authority. For instance, the DKU management body listened to students and took students as the center of education. Compared to Chinese national universities, DKU offers relatively more freedom in academics, student life, and university administration. However, it is still not the exact environment of higher education in the U.S. It is a localized autonomy.

The teaching and learning at DKU are much shaped by students. For example, Ximo spoke out that he argued with the office of academic affairs about the prerequisite for certain courses, but DKU personnel in charge of this aspect did listen to their concerns and made compromises based on the shreds of evidence provided by students. He mentioned that this was not the first time. During the researcher's career at DKU, he heard an anecdote that students posed about their newly established residence halls, asserting they were not ready for living. Through broad and in-depth argument, the students finally were given opportunities to have one

month of stay at a prime hotel under the payment of DKU, although no students finally lived at the hotel, it could be signed as a gesture that DKU students won.

In *Transformative Learning in Times of Global Crisis: Reflections on Collaborative Working Practices*, DKU faculty reflected that professors engaged students to participate in course design during COVID-19 (Davies et al., 2020). Autonomy provides the fundamental land for students to grow their mindset, empower them to understand they are equal and their arguments can land into something. Alice pointed out that she appreciated that DKU residences are all administrated by students, and there are no regulations for controlling students' activities compared to the requirements of Chinese universities.

> Alice: I think one thing our school does really well is the residential management, where the Resident Assistants (RAs) are students themselves. This is really great because unlike in schools in China where there are dormitory attendants or teachers checking on you, here it is completely student-led. They guide and supervise your life, and I believe this is really beneficial for the personal development of students' leadership skills. *我觉得我们学校做的很好的还就是那个宿管，就是那个 RA 是由学生担任的，因为这件事情真的很好，就是不像国内学校都是有宿管阿姨，或是你班主任来查寝，或者怎么样，但是我们就是完全是由学生去指导你的生活，并且去监督你，我觉得这对于学生个人的领导力的发展其实也是很好的。*

Furthermore, DKU autonomy allows Alice to be her CEO, as she could work and arrange in her own rhythm. Another instance is that she was the only one who took summer courses at Duke so that she could get more time for her subsequent internship during her senior year.

Global Diversity

The international environment is deemed to be the cause of global perspectives. Students at DKU benefit from the interaction with global faculty and international students. Faculty at DKU are globally recruited by Duke University. Also, a small amount of faculty are the professors at Duke who voluntarily teach at DKU for one or two semesters. The instructional language for DKU is English and the community is inclusive and equitable.

Around one-third of its student population is international. DKU has claimed that its international students are from 67 countries with the U.S. as its principal country for international students by far. These international students live and study with Chinese counterparts in the same residence halls and can share their dorms with Chinese students. They live in the same community with Chinese students. It could be asserted that international students and Chinese students are equally treated. Such an environment could allow Chinese students to experience a global education in China.

However, COVID-19 viciously disrupted the international environment. The class of 2024 was completely affected by this crisis and during their first two years, DKU was immersed in the inconsistency of this intercultural communication. During the interview, the impact of the pandemic has significantly affected students' college experience, particularly in terms of the international atmosphere on campus. With the first two or even three years heavily influenced by the pandemic, they may have missed out on fully experiencing the international diversity and interactions that would typically be present. It is understandable that when international students return after the pandemic, there might be a noticeable shift in dynamics and relationships among students as everyone adjusts to the new normal. Susan's attitude represents this truth.

> Susan: I actually feel like we're at a bit of a disadvantage because the pandemic has taken up the past two, even three years. So, although I have sensed some international

atmosphere, I haven't experienced it to a great extent. What's even more pessimistic is that once the pandemic is over and international students return, you'll realize that our batch is already in their junior year, and naturally, everyone will have changed. *其实我觉得我们这些来讲是比较吃亏的，因为疫情占了前两年，甚至是前三年的时间，所以国际化的氛围我虽然有感受到一些，但是没有感受到很多。更悲观的是的，这个疫情结束，国际生都回来之后，你会发现。其实我们这届都已经大三了，就是大家会很自然的就变了。*

Ximo mentioned that the link with foreign professors is still there since he knew that working with a Brazilian professor helped him break the stereotype, but the relationship with foreign students is limited as he did not even know one foreign student in his cohort when occasionally meeting him during dining. Rachel voiced that to facilitate international students' learning, DKU had to reconcile which at a certain level, caused such disconnection, she addressed that any relationships rose through shared practice.

Rachel: Also, even at that time, some teachers would allow international students to watch recordings. Of course, this is a flexible way of doing things. Not to say it's bad, but in this way, international students actually have less participation in the class. That is to say, everyone doesn't see the international students, doesn't see this person, and after almost a semester, they don't know that there is such a person in the class. This is the situation, so the opportunity to establish a friendship with him/her naturally becomes less. *还有包括就是甚至当时是有一些，有些老师就是会允许国际生去看 recording，当然这个是很灵活的一种变成方式，没有说这样不好，但是就是这样的话，其实国际上就是在课堂上的参与也会少，就是说就是大家见不到这国际生，见不到就这个人，然后差不多一个学期下来都不知道班上有这么一个人。就是这么一个情况，所以就是你跟他建立友谊的这个机会自然就会少。*

Despite presenting itself as an international environment, DKU was substantially affected by COVID-19, with these five participants being the main victims. Such damage was irreversible. The researcher empathized with their experiences, suggesting that this could have hindered students' vision of globalism. Even though the pandemic has passed, it remains unclear whether DKU has fully returned to its pre-pandemic state.

Chapter Summary

In this chapter, the findings are presented based on the three research questions. To start, the profiles of the five students are introduced and reasons for labeling are provided. The first research question categorizes noncognitive skills into seven animating principles, solidified by participants' voices. The second question encompasses three themes: enjoying the fame of DKU, bettering career development, and handling life challenges. As for the third question, this chapter also explores how DKU supports students' noncognitive skills development and three main themes are unhiding: Educational Engagement at DKU, Responsive Teacher-Student Relationships, and DKU's Authentic and International contexts. Detailed information is provided subsequently. The next chapter delves into a discussion of the findings, drawing connections to previous research, the theoretical framework, implications, etc.

Chapter 5 - Discussion and Conclusion

This research investigates Chinese students' noncognitive skills development at Sino Joint Venture Universities through a case study of DKU. Five DKU senior students were successfully recruited and interviewed. After thematic analysis, the findings have been presented in Chapter 4. In this chapter, the researcher is purported to summarize the findings, discuss them, and connect them with previous literature and theoretical framework. Implications and potential research are addressed as well.

Noncognitive Skills at DKU

In this study, all five participants demonstrated the advanced skills in collaboration, communication, leadership, problem-solving, practice, and creativity that DKU aims its students to possess under the umbrella of seven animating principles. These are the foundational skills that ensure DKU graduates' excellence in career attainment and other professional pursuits. Generally, all participants value these noncognitive skills they developed or grew at DKU, which are believed to better their career pursuits and strengthen their mindset in being themselves. Generally, students enjoy their learning at DKU partially because of DKU's fame. Although each participant is a unique individual with a different personality, all of them know what they expect to do in the future. Despite that DKU has a competitive environment, students could pursue a diversified track and participants fumbled toward their goals with different exploration journals. Rachel mentioned that she was geared toward psychology, and Ximo stressed how he compared majors in applied physics and data science to eventually decide on data science as he could obtain a strong sense of self-fulfillment through the accomplishment of real-world projects.

Susan addressed that media arts courses assisted her in expanding her perspective in presenting literature while Alice stated that her goal of pursuing a career was out of thoughtful consideration. Despite that the long-term goals have not been shown in this research, all participants understand and are well-prepared for their next stages of goals.

The evidence of noncognitive skills development in this research echoes previous research that "interventions in the secondary or tertiary education sector may be a promising avenue to boost noncognitive skills" (Kassenboehmer et al., 2018, p. 558). The findings assert that liberal arts education is instrumental to students' career development (Cameron et al., 2018; Dorman & Brown, 2018). Furthermore, such findings might pose a reasonable reason that graduates had distinct edges regarding further study and employment and the overall employment rate reached 95.84% (Wu et al., 2022).

Absence of Rooted Globalism and A Purposeful Life

Ultimately, as one of seven animating principles, rooted globalism, which is also the aim of DKU education and the principal purpose of liberal arts education, has not been substantialized by these participants. Only did Susan mention a cultural awareness that she assumed students would have to encounter in the future. This weak evidence of this skill might be attributed to two reasons. First, COVID-19 created disruptive effects on the class of 2024 as they suffered from the end of high school to the first two years of their college education. The international environment does not sufficiently produce the assumed impact on these students. In a critical statement, the internationalism of DKU could not be fulfilled not only because foreign students and faculty could not enter China but also because the highly sensitive tense of conflict during this period piqued people's minds. Participant Rachel emphasized that all collaborations

should be grounded in shared practices; however, this foundation could not be established during the crucial first two years when students are most receptive to embracing and exchanging ideas.

The second cause might be China's context - favoring no political freedom. Simon (2022) mentioned that the DKU administration denied the students' proposal to recite the Quran.

> "When a group of students, international and Chinese, wanted to hold a candlelight vigil after the murder of over fifty Muslims in Christchurch, New Zealand in March 2019, the DKU student affairs personnel would not allow the students to read a pertinent passage from the Quran because it was considered to be a religious book. When the students pressed their case directly with the Chancellor/Party Secretary, the decision to block the reading was upheld for similar reasons" (p. 74).

Other taboo questions such as opening a new course about the Hong Kong movement were vetoed. Without sufficient freedom, it is difficult to generate students with rooted globalism. This finding provides a contradictory view that previous scholars hold about liberal arts education in China: "China has rich soil for the Western liberal arts education because the liberal arts tradition and Confucian tradition share fundamental similarities in their humanistic educational philosophy" (Cheng, 2017, p. 473). However, this finding corresponds to what Conlon (2020) found in his phenomenological study of Chinese students' learning experience at NYU Shanghai as he addressed the development of global citizenship was not attained in NYU Shanghai's liberal arts education approach. This finding strengthens what Becker (2014) advocated was that Asian countries should ensure students are exposed to a number of perspectives that are not favored in some countries.

A purposeful life is another less evident area in this research. Students are over-concerned about their future development, and all of them consider a practical means of

educational purpose: personal development. Rachel voiced this is due to the macro environment of Chinese society where careerism predominates. Fundamentally, this phenomenon reflects John Dewey's statement that schools are the mirror of society (Dewey, 1937).

Mitchell and Seiler (2015) mentioned that there are two defenses of the liberal arts model: a civic one and a utilitarian one. "The civic rationale is predicated on the idea that a liberal arts education produces good citizens, the instrumentalist defense of liberal arts education asserts that the dispositions of resourcefulness, versatility, and autonomy stressed in liberal arts education sustain and advantage graduates as they navigate the job markets" (Mitchell & Seiler, 2015, p. 9). Rooted globalism and a purposeful life, are essential purpose of liberal arts education, but this study reveals they are not well actualized, which presents an example that liberal arts education in China might not fulfill the purpose of "producing free citizens" (Nussbaum, 1997). Such a finding offers a lesson for the scholars and practitioners who process liberal arts education in China. The findings from this research strongly showcase that DKU's liberal arts education could substantialize students' professional and career skills, reflecting the previous findings that liberal arts education in China is principally for utilitarian purposes (Cheng & Zhang, 2020). Also, these findings prove that "the rise of the liberal arts abroad is driven precisely by utilitarian concerns" (Mitchell & Seiler, 2015, p. 11).

Three Major Themes Oriented Noncognitive Skills Development

In this research, three major themes about how DKU facilitates Chinese students' noncognitive skills development at DKU, which are presented below:

1) educational engagements at DKU, in which students process experiential learning by engaging in interdisciplinary curriculum and participating in multi-faceted practices;

2) responsive teacher-student relationships, in which students regard professors as role models and benefit from support and affective relationships with professors, meanwhile, they are impressed by and have assistance from other students and staff;

3) DKU's authentic and international context, where students could access real-world challenges, enjoy a high level of autonomy, and work with diverse perspectives.

To better understand these factors, the researcher categorizes the examined variables into three genres: positive, neutral, and negative.

Table 5.1. Classification of DKU's Influential Factors into Three Genres

Positive	• Teacher-Student Relationship, • Small Class, • Research, • Projects, • Internships, • Clubs and Associations, • Major Undecided, • Real-world Challenges, • Autonomy, • Global Diversity
Neutral	• Competitiveness
Negative	• Seven-week Block, • Common Core Courses, • Management Inefficiency, • Decrease of DKU Fund, • COVID-19

Educational Engagements at DKU

A small class is a strong stimulus for noncognitive skills development as it could generate a conducive environment for interaction and communication among students and professors. In

smaller settings, an individual can obtain more concern and care from professors or even classmates, which could generate a positive teacher-student relationship. This finding adds to the literature base that a small class could positively impact noncognitive skills development (Dee & West, 2011). It should be emphasized more as participants deem that small classes are one of the most valuable experiences that they could have at DKU. Susan even attributed DKU's success to its small class setting.

Research and projects including diverse course projects embolden the experiential learning that DKU advocates, the researcher found that participants are driven and "tortured" by the rigorous standard, which engages students to problem-solve, innovate, communicate, manage schedules, self-recognize, etc. during this process. Kaiser et al. (2014) asserted that undergraduate research is coupled with the academic ideals of inquiry, discovery, and critical thinking. During the researcher's daily exposure, DKU's leadership personnel recognize that research opportunities provided for students are a critical advantage that DKU brings to students signalizing a different approach compared to other universities, such research is heavily invested and can only be achieved in a relatively small community. This finding can serve as empirical evidence of why liberal arts colleges are remarkably successful in training eventual Ph.D. (Cech, 1999; Cover, 1996).

Internships, clubs, and activities are inseparable from students' college life. In this research, they generally play beneficial actors in students' noncognitive skills growth. However, in this research, participants like Yana mentioned that activities and clubs are not that useful for career development compared to the research, it does present complexity towards this problem. The reasons might be attributed to multiple aspects, one is that not every student at DKU understands the essence of liberal arts education as the unique admission in China requires DKU

to recruit students of Gaokao experiences; second, it could be correct that when applying for graduate programs, students are mainly evaluated in academic and research.

An unexpected finding from this research is the curriculum design as the common core courses and seven-week block failed students' expectations in their learning. In this research, common courses even incur some aversion from students, this finding betrays the previous practice of liberal arts education that students should have more humanity and social sciences courses because of their benefit (Cheng & Wei, 2021; Nussbaum, 1997; Yang, 2016). Another pain point for students learning at DKU is the seven-week block. In this research, this semester's system was overwhelmingly complaint and criticized by participants, which revealed a deep discrepancy between education innovation and practice. DKU's leadership body acknowledged of this feedback, yet, no specific measures have been taken to address this semester system.

Responsive Teacher-Student Relationships

As the researcher found that the teacher-student relationship can be counted as the paramount factor in participants' experience at DKU. In this research, it encompasses three domains: professor-student relationship, student-student relationship, and staff-student relationship. In this research, the professor-student relationship, and student-student relationship generally assisted students' learning at DKU, which are regarded as the positive influences on students' noncognitive skills development; the staff-student relationship generally supports students' development, yet, it depends on the particular experiences that students have.

Among the teacher-student relationships, the professor-student relationship predominates through courses, research, clubs, and other events. This research found that professors at DKU do not only act as role models and perform charisma but also provide the affective and support

dimensions of the teacher-student relationship identified by Hagenauer and Volet (2014). The affective dimension describes the bond built between students and teachers and the support dimension describes the support that must be provided for students' success at university (Hagenauer & Volet, 2014, p. 374). Such findings supported the previous research that a good teacher-student relationship can be helpful to students' noncognitive skills. Cheng (2016) tested the theory that noncognitive skills are developed through role modeling by teachers. He used longitudinal data to show that students receive increases in particular noncognitive skills in years when they have teachers who have higher levels of those same skills, in which the researcher drew upon social learning theory to posit that students may learn noncognitive skills through observing role models such as teachers. Blazar and Kraft (2017) posited that teachers who provide more social and emotional support improve student self-efficacy and happiness not because of a particular pedagogical approach but because of the behaviors that they model in providing such support (Blazar & Kraft, 2017).

The second is the student-student relationship, as participants mingle with fellow students at DKU. Their influence on participants is obvious. Participants generally observe other students and have academic engagement and life intersection with them. Also, fellow students become the first and major sources once they have doubts and needs. This finding describes the role modeling process elaborated by Bandura (1997). DKU builds a community of mutual assistance and reciprocal help. The remarkably positive student-student relationship is a strong booster for noncognitive skills development at DKU. Kassenboehmer et al. (2018) found that noncognitive skills were substantially cultivated and reinforced through communication with fellow students. Certainly, as for higher education settings, student-student relationship plays a vital role in

navigating students' development. A supportive ethos of university certainly improved participants' noncognitive skills development (Shorette et al., 2015).

These findings generally add to the literature base the significance of teachers' relationships, in addition to the commonly acknowledged aspects: professor-teacher relationship, and student-student relationship, this research also found out that staff-student relationship impacts noncognitive skills development in Chinese contexts.

DKU's Authentic and International Contexts

In terms of contexts, the researcher found that autonomy is another keyword permeating participants' interviews. Because of this environment, participants could pursue their own tracks, be rights defenders, conduct learning reflecting their own rhythm, as well as being equal to others, and so on. In this research, autonomy could be identified as the core component in deciding students' noncognitive skills development. As freedom is a decisive factor for higher education, this finding signifies that localized liberal arts education in Asian countries should be aware of its environment which can allow students to possess sufficient autonomy.

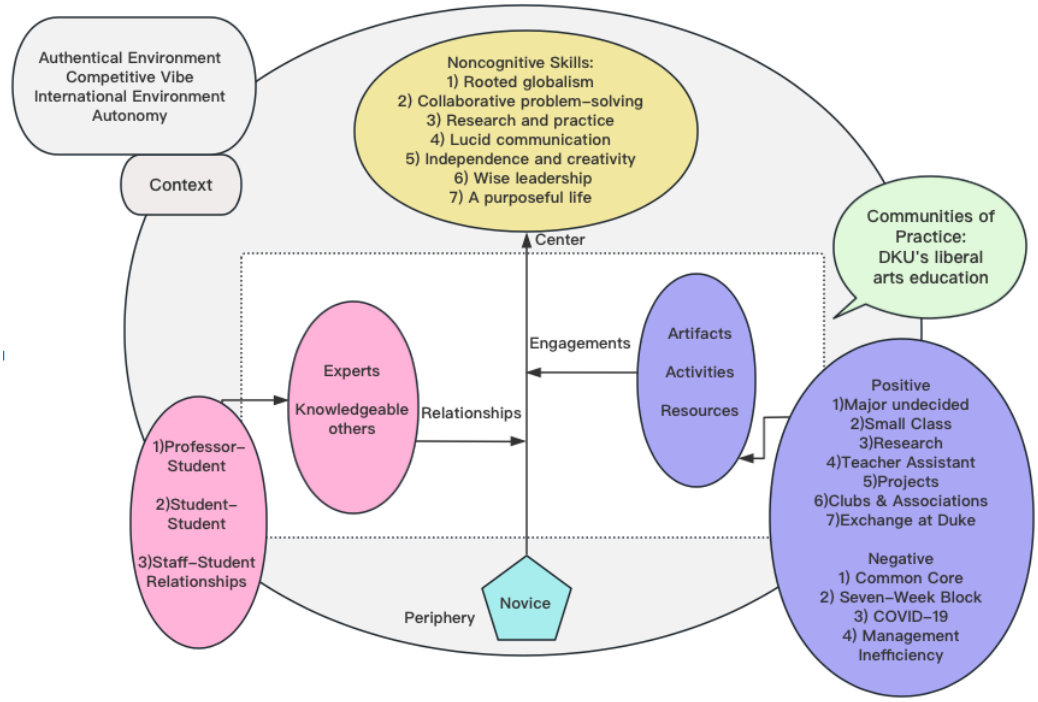
The decrease in funds in university administration and the impact of COVID-19 are apparent. How further DKU could go still depends on its sustainability in funds. This finding echoes the previous assertion predicated by Simon (2022). The management inefficiency is a long over-hauling problem ghosting DKU, and measures have been implemented, yet could not eradicate this problem. As it is not the primary focus of DKU's education, participants displayed tolerance towards it. However, this management issue could be seen as an example of operating Sino joint venture universities where diverse perspectives and high demands exist, which is also partially attributed to the malfunction of cultural fusion.

Connection to the Theoretical Framework

Situated Learning Theory is used in this study and guides the whole research. Situated Learning Theory addresses a kind theory of social learning positing that learning occurs through social interaction and engagements. Lave and Wenger (1991) defined this theory addresses "a set of relations among persons, activities, and the world over time and in relation with other tangential and overlapping communities of practice" (p.98). Learners move from newcomers to experts. Key elements addressed in this theory are engagement, relationship, and context.

Connecting with the theoretical framework, this research finds out that the relationship as a term is salient at DKU, it demonstrates that the teacher-student relationship is the core drive for leading students' growth in noncognitive skills. The artifacts and resources such as the interdisciplinary curriculum, small classes, research, projects, internships, activities, Duke exchange, etc. scaffold or hinder the development process. As for the context of this research, DKU is characterized as an authentic and international environment with competitiveness and autonomy. The Figure 5.1. could illustrate this process in a visual format.

Figure 5.1. DKU Education Model in Situated Learning Theory



Implications

While this research explored an educational model effective in cultivating noncognitive skills, it adds to the gap in research on noncognitive skills during college years in China and for less advantaged Chinese students, which were scant in academia. The findings offer new insight for researchers and pertinent stakeholders including students, parents, administrators, and policymakers, as well as audiences who are interested in liberal arts education. In the following four sections, implications are arranged with subtitles as Implication for DKU, Implication for other Chinese universities, Implication for global cooperation, and Potential Future Research.

Implication for DKU

In general, DKU could take pride in its liberal arts education practices such as small class setting, research-based learning, abundant resources, intimate teacher-student relationships, Duke exchange, a nonhierarchical administration, autonomy for students' development, etc., these should be reinforced in the future education.

However, three urgent aspects should be taken into pertinent administration's consideration. First, it is critical that the leadership should reexamine the major components of liberal arts education it has such as common core courses to better design topics that fit students' needs. Due to the autonomous environment, these common core courses could be potentially and collaboratively designed by students as well. Second, due to frequent complaints, it is vital for DKU to investigate its seven-week block to find a solution to address it. It is worth reinvestigating other components of liberal arts education by taking in students' perspectives. Third, the management problems which have long existed at DKU such as low efficiency, overlapping of departments, and food qualities of the dining hall, should be carefully studied, and actionable changes or plans should be made accordingly.

One of the big concerns is the DKU's sustainable development as participants generally worry about whether the education could continue. The fund has saliently decreased and Ximo mentioned that students now need to pay some money for once free events. Yana voiced the downgrading of second-phrase construction qualities as the glass would break during summer and the campus was drowned last summer. Susan mentioned that DKU's advantage lies in its small class education and she showed worries about the continual expansion of DKU admission number, which would eradicate the DKU's edge. When addressing operating Sino Joint Venture Universities in China, Simon (2022) addressed financial challenges are always alluded to above

among operational and administrative challenges. DKU should be creative in securing funds to better support its high-caliber research and education.

Implication for Other Universities

This research offers a valuable lesson that could be shared by other Asian countries where high-stakes tests still dominate. Specifically, this research found that teacher-student relationships, small classes, and opportunities to research and projects significantly lead to the development of students' noncognitive skills. The researcher believes that Sino Joint Venture Universities and even Chinese national universities could emphasize these practices; particularly, the undergraduate research opportunities could be further and abundantly provided as it is provided as one of the major components for experiential learning.

Another critical aspect is the teacher-student relationships in which Sino Joint Venture Universities should advocate responsive relationships between students and professors. Professors should invest in undergraduate students with approachability and amicability, which should be attributed to the relevant policies designed and implemented by universities. Furthermore, a mutually helpful relationship should be promoted among students to lead to reciprocal relationships, despite the competitiveness among them.

Implication for Global Cooperation

This research can generate insights into cross-national education and policymaking. Significantly, the exploration of DKU's education model sheds light on the Sino Joint Venture Universities, assisting audiences in understanding the novel education straddling Eastern and

Western education. These findings provide real lessons for starting other international and global education initiatives in other countries.

Potential Future Research

Due to the time limit and the researcher's primary focus, this research is centered on descriptively examining noncognitive skills. In the future, several possible research strands can be designed and conducted. First, future researchers could further investigate one or two noncognitive skills at DKU, which assists in providing more insights about the development process by comparing the status before and after DKU's studies. For instance, during this study, the researcher oscillated from diverse tracks, so future researchers could study the students' research competence that DKU advocates.

Second, in this study, the researcher discovered that variables such as small classes, teacher-student relationships, and autonomy, among others, have a more significant impact on students' noncognitive skills development compared to other factors. In the future, a quantitative study could be conducted to examine the causal relationship which could engage thorough participation from the DKU community.

Third, a comparative study can be employed to examine multiple sites. For example, comparing DKU with other Sino Joint Venture Universities can produce generalizable insights in this area. Last, but not least, it might be insightful to explore why liberal arts education in China could not fulfill the purpose of cultivating global citizens based on this research on DKU and the previous research pertinent to NYU Shanghai conducted by Conlon (2020).

Conclusion

This research leverages the qualitative case study approach to understand Chinese students' noncognitive skills development at Sino Joint Venture Universities. DKU is the research site. As for research question 1, while this research employed DKU's seven animating principles as a framework of noncognitive skills, five participants expressed solid and incredible competence in collaboration, communication, problem-solving, leadership, creativity, research, and practice. These are the skills that these participants are obliged within academic and professional settings. Yet, other noncognitive skills (rooted globalism and a purposeful life) have not been sufficiently identified in this research. Rachel even mentioned that DKU matters little in cultivating students' sense of a purposeful life. Regarding research question 2, three themes come into shape: enjoying the fame of DKU, bettering career development, and handling life challenges. In terms of research question 3, three major themes about how DKU facilitates students to develop noncognitive skills emerge 1) educational engagements at DKU, in which students practice experiential learning by engaging in multi-faceted practices; 2) responsive teacher-student relationships, in which students benefit from support and affective relationships with professors, being impressed by and having assistance from other students and staff; 3) DKU's authentic and international context, where students could access the real-world challenges, enjoy a high level of autonomy, and work with diverse perspectives, despite that they might need to survive in a competitive vibe. This research is valuable in both academia and practice contributing to understanding a mechanism that can foster less advantaged students' noncognitive skills during their college years.

Chapter Summary

This chapter starts with a discussion of findings in relation to research questions, links them with previous literature, and engenders possible explanations. The theoretical framework of Situated Learning Theory is applied within the context of DKU. Then, implications are outlined, a conclusion is drawn, and the potential avenues for future research are identified.

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Appendix A - Interview Protocol

This interview protocol in both Chinese and English guides the interview, the interview was carried out in Chinese.

1. Which specific noncognitive skills have you personally identified as being significantly improved during your study at DKU? Could you provide any examples? *你觉得你哪些 noncognitive skills 在昆杜学习中得到很大的发展？* Since participants were not familiar with noncognitive skills, I used the seven animated principles by DKU to indicate what noncognitive skills are.

- Rooted Globalism
- Collaborative Problem-Solving
- Wise Leadership
- Lucid Communication
- Research and Practice
- Independence and Creativity
- A Purposeful life

2. How do you perceive the impact of the improved noncognitive skills on your overall personal development and well-being? *你怎么理解你提高的 noncognitive skills 对你整体个人发展和福祉的影响？*

3. In your opinion, how has DKU contributed to the improvement of these noncognitive skills during your time as a student? *据你了解，昆杜如何提升你的 noncognitive skills?* Due to the complexity of this question, during the research, I asked more about the subsequent components.

a. Interdisciplinary curriculum

- general curriculum
- seven-week block
- majors undecided, first two years' exploration
- small-class class

b. Real-world applications:

- Internships, projects, research, clubs and associations, activities

c. Global and multi-cultural context:

- international environment (faculty and students who are from abroad),
- exchange opportunities at Duke University

d. Close and approachable relationships with faculty and others.

- Peers, and fellow students' influence.
- Staff and other leadership personnel

4. Can you provide specific examples of programs, initiatives, or experiences at DKU that you feel have played a significant role in enhancing your noncognitive skills? *能提供些具体的例子，你在昆杜的项目经历等，你感觉严重影响你的 noncognitive skills？*

5. Is there anything else you would like to share about your experiences related to noncognitive skill development at DKU? *还有什么其他分享，关于你自己在昆杜的 noncognitive skill 发展？*

6. Do you have any suggestions or recommendations for how DKU could further support the development of noncognitive skills among its students? *对于昆杜未来能做更好发展学生的 noncognitive skills 你有什么建议或者推荐？*

Appendix B - Participants Recruitment Notice

KANSAS STATE UNIVERSITY

Your Participation is Wholeheartedly Welcome!

My name is **Leo Li**, a doctoral candidate at the **College of Education, Kansas State University**. Under the guidance of my supervisor, **Dr. Clark Spencer**, I am embarking on a research journey that aims to uncover the unique ways Duke Kunshan University supports its Chinese students in developing their non-cognitive skills.

Who Can Participate?	• Year 4 students, currently enrolled at DKU
What Does Participation Involve?	• A one-on-one interview with me, lasting between **60-90 minutes**. The interview will be conducted either in English or Chinese in Spring 2024.
Token of Appreciation:	• To thank you for your time and valuable insights, **participants will receive a 200 RMB gift card**. ♥
Ethical Assurance:	• This study has received IRB from the **Kansas State University Research Ethics Board**, ensuring that all discussions will be conducted with the utmost respect and confidentiality.

Interested? Let's Connect!

For more information or to volunteer for this exciting study, please reach out to me:

- **WeChat:** 18016026051
- **Email:** long9@ksu.edu.cn

Thank You for Considering This Opportunity!

Leo Li (ABD), Education Advisor, Previous Recruiter at DKU

Appendix C - Informed Consent

KANSAS STATE UNIVERSITY
University Research Compliance Office

Institutional Review Board (IRB)

Informed Consent Template Form

comply@k-state.edu | 785-532-3224

PROJECT TITLE:

Chinese Students' Noncognitive Skills Development at Sino Joint Venture Universities, A Case Study of Duke Kunshan University.

PROJECT APPROVAL DATE:	10/25/2023	PROJECT EXPIRATION DATE:	10/25/2024	LENGTH OF STUDY:	1 year

PRINCIPAL INVESTIGATOR: Prof. Spencer Clark

CONTACT DETAILS FOR PROBLEMS/QUESTIONS: Prof. Spencer Clark
jspencerclark@ksu.edu

IRB CHAIR CONTACT INFORMATION: Lisa Rubin, Chair, Committee on Research Involving Human Subjects, 203 Fairchild Hall, Kansas State University, Manhattan, KS 66506, (785) 532-3224; Brad Woods, Associate Vice President for Research Compliance, 203 Fairchild Hall, Kansas State University, Manhattan, KS 66506, (785) 532-3224

PURPOSE OF THE RESEARCH:

Noncognitive skills are valued in the 21st century as previous scholarships evidenced the close connection between academic, career, and even mental health (Heckman et al., 2006; Hoschler et al., 2017; Kautz et al., 2014; Schoon, 2013). Through this qualitative case study, I expect to examine Chinese students' noncognitive skills development at Duke Kunshan University to understand how noncognitive skills could be developed during the college period. Qualitative research could "empower individuals to share their stories" and we could understand the "contexts" (Creswell, 2013, p.48). Consequently, this research hopes to gain rich information on these students' perceptions of their noncognitive skills development at Duke Kunshan University. I believe several purposes could be achieved. Firstly, this research will contribute to the literature gap about college students' noncognitive skills development in Asian cultural contexts. Secondly, it could generate insights about how to cultivate noncognitive skills during the college period at Sino-Joint Universities in China for the student groups who are from the high-stakes testing environment. The successful lessons could be worthfully applied in other contexts. Thirdly, students' perspectives could be valued, and further changes or improvements could be made correspondingly by Duke Kunshan University's leadership and the education bureau in China for administering international education initiatives.

PROCEDURES OR METHODS TO BE USED:

The researcher will use purposeful sampling strategies to select participants (Creswell, 2013). Creswell and Poth (2018) suggest a limited number of participants in a case study as this number could amply identify the themes of the case. To best represent the lived experience of this population, based on the concept of doable research, I plan to recruit around 6 participants who should meet the criteria below: year 4 students as they have the longest experience at DKU. As a formal undergraduate recruiter at DKU, I know some students well and have connections with many of these students, therefore, participants are based on sampling criteria. To avoid purposeful bias, I will design a recruitment notice and get it cycled among students to see whether they are students who would like to participate. I also use students' recommendations to find out participants who are interested in this research.

RISKS OR DISCOMFORTS ANTICIPATED:

Acknowledging participants' fear of being judged, the researcher will underscore there will not be right or wrong

answers and that their experiences will not be used against them but for this research. The interviews will be audiotaped and transcribed. And the transcribed scripts will be reviewed by participants, and they could make changes as they prefer.

BENEFITS ANTICIPATED:

This research expects to take a qualitative research approach to see how profoundly this new education could develop Chinese students' non-cognitive skills through the lens of students themselves. Certainly, it will offer us more understanding of this education, particularly how students perceive it, which in the end will offer guidance for policymaking and university administration.

EXTENT OF CONFIDENTIALITY:

The collected data is only for this research and will be kept confidential and is only accessible by the researcher. Participants will be given pseudonymous names instead of their real names.

The information or biospecimens collected as part of the research, even if identifiers are removed, will not be used or distributed for future research studies.

Terms of participation: I understand this project is research, and that my participation is voluntary. I also understand that if I decide to participate in this study, I may withdraw my consent at any time, and stop participating at any time without explanation, penalty, or loss of benefits, or academic standing to which I may otherwise be entitled.

I verify that my signature below indicates that I have read and understand this consent form, and willingly agree to participate in this study under the terms described, and that my signature acknowledges that I have received a signed and dated copy of this consent form.

(Remember that it is a requirement for the P.I. to maintain a signed and dated copy of the same consent form signed and kept by the participant).

PARTICIPANT NAME:			
PARTICIPANT SIGNATURE:		**DATE:**	
WITNESS TO SIGNATURE: (PROJECT STAFF)		**DATE:**	

Appendix D - Kansas State IRB Management

KANSAS STATE UNIVERSITY | University Research Compliance Office

TO: J. Spencer Clark
Curriculum and Instruction
Manhattan, KS 66506

Proposal Number: IRB-11914

FROM: Lisa Rubin, Chair
Committee on Research Involving Human Subjects

DATE: 02/02/2024

RE: Proposal Entitled, "EDD dissertation project: Chinese College Students' Perception of Noncognitive Skills Development,
A Case Study."

The Committee on Research Involving Human Subjects / Institutional Review Board (IRB) for Kansas State University has reviewed the proposal identified above and has determined that it is EXEMPT from further IRB review. This exemption applies only to the proposal - as written – and currently on file with the IRB. Any change potentially affecting human subjects must be approved by the IRB prior to implementation and may disqualify the proposal from exemption.

Based upon information provided to the IRB, this activity is exempt under the criteria set forth in the Federal Policy for the Protection of Human Subjects, **45 CFR §104(d), category:Exempt Category 2 Subsection ii.**

Certain research is exempt from the requirements of HHS/OHRP regulations. A determination that research is exempt does not imply that investigators have no ethical responsibilities to subjects in such research; it means only that the regulatory requirements related to IRB review, informed consent, and assurance of compliance do not apply to the research.

Any unanticipated problems involving risk to subjects or to others must be reported immediately to the Chair of the Committee on Research Involving Human Subjects, the University Research Compliance Office, and if the subjects are KSU students, to the Director of the Student Health Center.

Electronically signed by Lisa Rubin on 02/02/2024 5:37 PM ET

203 Fairchild Hall, Manhattan, KS 66502 | (785) 532-3224 | fax: (785) 532-3278