

Educating the Innovative and Entrepreneurial Individual in China

Naja Morell Hjortshøj, PhD fellow, Aarhus University
Jens Chr. Skous Vej 7, 1465, 319, +45 25 62 16 48, najhjo@cas.au.dk, [website](#)

Key Words: Policy; impact; student learning; didactic methods; higher education; China

Questions we care about (Objectives)

This paper investigates the relationship between policy and subject-making in the context of entrepreneurship education in China. It focuses on how the ambitions that are stated in the Chinese government's policy on innovation and entrepreneurship education unfold in the learning environment at a Chinese top-university. The study aims to contribute to the existing research literature by understanding how Chinese university students take up and reflect on these new educational practices that seek to counteract China's educational tradition in favour of fostering autonomous learners who can think creatively and solve complex problems.

Approach

This study applies ethnographic methods, including participant observation and qualitative interviews. The results stem from a fieldwork conducted in a design thinking course, where data was collected through active participation in group work and interviews with Chinese students as well as the educator.

Results

The study demonstrates the existence of three dilemmas in which the role of the individual is negotiated. Those dilemmas concern the relationship between the teacher and students, the collaborative processes in group work, and factors that constitute the purpose of becoming innovative and entrepreneurial. It shows that the ambitions stated in the Chinese government's policy on entrepreneurship education were both internalized and challenged by Chinese university students. The students thus internalized the ambitions by explaining that the new educational approaches inspired them to think more independently and not only expect that the teacher can tell them the right answers. At the same time, the students also challenged the ambitions by emphasizing that innovative and entrepreneurial processes can become more efficient when a student assumes the role of a leader in the groups and one avoids pursuing alternative ideas that go against the decisions made by the team.

Implications

The results suggest that to understand the reality of innovation and entrepreneurship education, we cannot solely rely on policy papers, but must study the actual practices taking place in institutions tasked with teaching innovation and entrepreneurship. The study thus encourages us to be aware of how students make sense of these educational approaches in relation to their own background and experiences, interaction with other students as well as future career paths.

Value/Originality

The interviews conducted with Chinese students reflect dilemmas and questions that do not necessarily only relate to China but point to challenges that concern innovation and entrepreneurship education in general. For example, the Chinese students struggled to negotiate factors that can motivate one to engage in innovation and entrepreneurship courses. Those factors were, on the one hand, an expression of the individual ambitions to create products that generate value for society and, on the other, the fear of being eliminated in the fierce competition on the job market if one does not achieve the ability to "innovate".

Abstract

This paper focuses on how innovation and entrepreneurship education is perceived and practiced by Chinese university students. It takes a policy launched by the Chinese government as its starting point, which emphasizes that Chinese universities need to cultivate autonomous learners who can come up with creative solutions to complex problems. The results of the study stem from fieldwork conducted in a design thinking course, where the students were introduced to pedagogical methods that differed from what they had experienced before. That caused the students to face three dilemmas in which the role of the individual was negotiated. Those dilemmas concerned the relationship between the teacher and students, the collaborative processes in group work, and factors that constitute the purpose of becoming innovative and entrepreneurial. The article shows that the expected outcomes of the Chinese government's policy on innovation and entrepreneurship were both internalized and challenged by the students, which leads us to consider new questions with implications for research on as well as approaches to teaching innovation and entrepreneurship.

Introduction

In 2018, the Organisation for Economic Co-operation and Development (OECD) launched a document with the title "The Future of Education and Skills" that describes what knowledge, competences, attitudes and values today's students need to acquire to become active, responsible and engaged global citizens. According to the report, students have to possess the ability to think critically and creatively, be self-regulative and practical-oriented, show empathy and collaborate. This is essential for them to become "change agents" of the future (OECD, 2018).

China's education system has been widely criticized in the Western world and accused of only attaching importance to rote learning and test-results (Abrami et al., 2014, Foreign Policy, 2015, Times Higher Education, 2016). Many Chinese policy makers, educators and citizens agree to the fact that China's education system faces severe challenges, which is exemplified with Chinese students who lack individual drive and creativity (Thøgersen, 2012). In order to counteract those problems, the Chinese government has made it mandatory that Chinese students in higher education institutions take courses in innovation and entrepreneurship. This initiative came into force in the beginning of 2016 and followed a speech that Chinese premier, Li Keqiang, held at World Economic Forum's annual meeting at Davos in 2015, where he emphasized: "*Mass entrepreneurship and innovation, in our eyes, is a "gold mine" that provides a constant source of creativity and wealth*" (Li, 2015).

In the following, I want to introduce three categories of literature on innovation and entrepreneurship education in China. Entrepreneurship education was introduced for the first time at a few selected Chinese universities in the beginning of the 21st century (Mok and Kan, 2013). Since 2012, the amount of research literature on entrepreneurship education in China has expanded significantly. The majority of this research is conducted by scholars from Chinese universities or through collaborative research articles by scholars from Western and Chinese higher education institutions:

1. The first category of literature focuses on how entrepreneurship education in China has been perceived by Chinese university students. The authors of those articles primarily apply quantitative surveys to understand Chinese students' interests, entrepreneurial intentions, knowledge of entrepreneurship education policies and satisfaction with current initiatives (Zhou and Xu, 2012, Xu, 2012, Fan and Qiu, 2013, Tang et al., 2014).

Characteristic for this category of research literature is that the authors, based on the outcome of the surveys, present a number of suggestions for how entrepreneurship education at Chinese universities can be improved.

2. The second category of literature sees the development of entrepreneurship education at Chinese universities as being dependent on national policies and the local institutions' organizational strategies. It presents the argument that the direction and development of entrepreneurship education in China is to a large extent determined by political agendas and university management (Mok and Kan, 2013, Anderson and Zhang, 2015, Wu and Benson, 2017).
3. The third category of literature investigates innovation and entrepreneurship education in China from an intercultural point of view. Educators, who have had experiences with teaching innovation and entrepreneurship education to Chinese university students, are beginning to contribute to this field by sharing their insights into how to structure the courses as well as the challenges with implementing these educational approaches in a Chinese setting (Lee and Yuan, 2018). These educators' description of how the environment for teaching innovation and entrepreneurship education in China differs from a Western context can be related to an article by the scholars, Heidi Ross and Yimin Wang, which elaborates on the way the concept of "innovation" is interpreted differently in academic papers on higher education reform in the US and China respectively. For example, the authors demonstrate that while disruption is highlighted as a generator of innovation in scholarly articles in the US, it is completely absent from Chinese academic literature that sees change and tradition as compatible (Ross and Wang, 2016).

The research articles above describe the state of innovation and entrepreneurship education in China by taking different factors into consideration. The first category of literature points out the fact that the state of innovation and entrepreneurship education should be understood in the light of the result of student surveys, whereas the second category of literature emphasizes that the state of innovation and entrepreneurship education depends on policies and organizational management at universities. Finally, the third category of literature sees the state of innovation and entrepreneurship education as being determined by how courses are organized and the way innovation in higher education is framed in academic papers.

This article presents a fourth approach to investigating innovation and entrepreneurship education in China. The generation of social practices in entrepreneurial learning contexts have rarely been researched by ethnographic fieldwork methods (Frederiksen, 2017). In this study, I therefore apply participant observation and qualitative interviews to find out how the Chinese government's policy on innovation and entrepreneurship education unfolds in the learning setting at a Chinese top-university (Spradley, 1980, Kvale, 2007). Specifically, I examine how Chinese university students take up and reflect on these – to them new – educational practices. The paper builds upon an argument proposed by the anthropologist Andrew Kipnis which states that Chinese policies do not necessarily have a direct impact on turning Chinese students into the kind of subjects that are imagined in policy papers (Kipnis, 2011). I thus argue that the design thinking course, which I followed at the Chinese top-university, led to different forms of subjectification among the students, in which they both internalized and challenged the Chinese government's expected outcomes of its educational policy. That was especially reflected in three dilemmas that concerned the negotiation of the role of the individual. Those dilemmas were connected to the relationship between the teacher and students, the collaborative

processes in the group work, and factors that motivate one to become innovative and entrepreneurial.

In the following, I first present the theoretical framework of the study and how it was conducted. Then I move on to analysing how the interviews with the Chinese students reflect each of the three dilemmas above, before I finally discuss how the students' way of negotiating the role of the individual should be understood in relation to China's educational tradition and the double-bind of wanting to realize personal ambitions, on the one hand, and navigating within predefined structures in society on the other.

China's educational tradition and efforts to put an end to it

Repetition and memorization have functioned as institutionalized practices in Chinese schools since the 14th century. It was Zhu Xi, the founder of a branch of the classic Chinese philosophy, Confucianism, who established the method of reading to the point of intimate familiarity, so that the student would achieve not only knowledge but also constancy of mind and self-control (Bakken, 2000). Exercising self-restraint constitutes the essence of the Chinese educational tradition, at which a Chinese person is expected to be utterly devoted to others without thought of self. Collectivism is thereby set before individuality (Bakken, 2000). Moreover, a basic principle in Chinese culture is that one should respect and be obedient to one's superiors – including teacher. This has often been characterized as a spoon-feeding relationship where the teacher should simply pour knowledge onto the students. Some Chinese educational theorists have viewed this process in which students mechanically copy what the teacher tells them to do as constituting the first step on a continuum, where those practices gradually reshape into creation and innovative thinking (Bakken, 2000).

These characteristic features of China's educational tradition are exactly what the Chinese government's policy on innovation and entrepreneurship education aims to counteract. This policy was launched by the Chinese State Council, one of the most influential political institutions in China, in May 2015 and describes the educational practices in Chinese higher education that need to be changed. It points out it being necessary to get rid of the "age-old malpractice" of students who study just to achieve a high score in tests and suffer from a severe lack of other competences. The policy emphasizes that the universities should create an educational environment, where students can discuss and participate actively, where practical experiences are integrated into the curriculum, and it is allowed to make mistakes. In order to achieve this, teachers have to take students' individual needs into consideration, foster autonomous learning and problem-solving skills as well as cultivate the students' ability to think analytically, critically and creatively (Chinese State Council, 2015a). This ambition to put an end to exam-dominated practice is similar to discussions taking place in the Western world on how entrepreneurship education can be a solution to recreate a "learning for life" practice instead of seeing the passing of exams as the essential purpose of education (Blenker et al., 2017).

The Chinese government's effort to replace a memorization-based education system with one that teaches creativity and reasoning is not new, however (Kipnis, 2011). Already in 1999, the term "quality education" (*suzhi jiaoyu*¹) was coined in official Chinese policies and denoted a broad change in pedagogy, curricula, teaching training and the structure of educational training from pre-school to university level. The idea was the creation of a new personality type that possesses other competences than the ones cultivated in an exam-dominated system (Bregnbæk,

¹ The words in brackets are Chinese translations of key-words in the applied material.

2011, Thøgersen, 2012). The concept of “quality education” thus encompasses an all-round development of the individual by emphasizing physical, intellectual as well as moral cultivation, which in official discourse is seen as closely related to the rise of the Chinese nation (Bregnbæk, 2010, Bregnbæk, 2016). Anthropologist, Susanne Bregnbæk, has argued that obtaining “quality” requires both self-sacrifice and self-actualization, which despite of being interconnected are not easily reconciled and thus take on the form of a “double-bind” (Bregnbæk, 2011). This double-bind manifests in the way that in order to succeed within the paradigm of “quality education”, the students have to engage in the same practices that the system considers inadequate and possibly harmful. In other words, the idea of developing creative competences does not necessarily constitute an alternative to test-based education, since the path to achieving those competences is also influenced by competition (Bregnbæk, 2011, Bregnbæk, 2010). In this paper, I will use the concept double-bind to discuss how the practices, which the Chinese government’s policy on innovation and entrepreneurship education aim to counteract, partially become reinforced when these educational approaches are actually implemented.

Case-study of a design thinking course at a Chinese top-university

This study took place at one of China’s top-universities, where I followed a design thinking course taught by a Nordic educator to a group of 26 master’s students, of which the majority were Chinese. The design thinking course lasted three weeks and was part of a collaborative master’s degree programme taught by a Nordic university and the Chinese top-university. Most of the students had a bachelor’s degree in engineering and were exclusively selected for joining the master’s degree programme.

Since the 1990s, design thinking has become a popular method to come up with solutions to complex problems. This is especially due to the influence of the co-founder of IDEO and founding dean of Stanford University’s d.school, David Kelley (Lee and Yuan, 2018). The Nordic educator emphasized that design thinking can help in the process of finding motivation and little by little narrowing down the complexity. His didactic method among others built upon the works of Lev Vygotsky, who advocated a socio-cultural perspective on learning and development, stating that collaboration and dialogue is essential for advancing learning. Vygotsky furthermore said that the educator should take up the role of a facilitator of learning rather than a knowledge-transmitter (Rowley et al., 2018). This was exactly why the Nordic educator preferred to be called “educator” instead of “teacher”.

The design thinking course was characterized by a learning “through” approach, which relies on students doing some of the actions of an entrepreneur by starting a business (fictive or real) (Robinson et al., 2016). In the course, the students were divided into five groups that each had to create a prototype, which could solve a problem in a developing country. The prototype had to live up to certain requirements; for example, the total cost of its production could not increase the amount of 6.5 Euro. The course was divided into short presentations given by the educator and group work in and outside class. During the three weeks, each group had to continuously do oral presentations in English in front of the class about how the development of their prototypes progressed. At the end, they had to do a final presentation of the prototype in front of a number of invited guests whom they were told to imagine as being potential investors. The presentation had to include what kind of need the prototype intended to solve and how it was better compared to other products on the market. Each group furthermore had to present a selfmade video which demonstrated the actual use of the prototype. The students were individually assessed based on the final oral presentation and the results of a written test which had taken place in the middle of the course term.

I was invited by the Nordic educator to participate in the course as both observer and active participant. The educator, who had a background in engineering himself, was informed about my field of interest from the beginning and knew that I wanted to study how innovation and entrepreneurship education is carried out in practice in a Chinese educational setting. Due to the fact that I am not an engineer myself, I could not participate in developing the prototypes which required a certain amount of technical knowledge. However, I still became an active member of a group consisting of four Chinese students, in which I assisted with carrying out some of the market research that was a precondition for creating the prototype. A few weeks after the course was over and the students had received their final grades, I conducted qualitative interviews with six of the Chinese students from the course and the Nordic educator. Two of the students I interviewed were from the group I had worked with, whereas the other interviewees were distributed among other groups from the course. The interviews with the students were all conducted in Mandarin Chinese, lasted about 40-60 minutes each and were transcribed afterwards. In the next sections, I will elaborate on how these interviews reflected the three dilemmas in which the role of the individual was negotiated.

Being independent and dependent: Teacher-student relationships in the past and present

It was characteristic for the interviews that the students drew a sharp line between their former educational experiences as bachelor students and the design thinking course. The students thus expressed that the Chinese teachers they had had during their bachelor's studies did not use to provide any kind of guidance to them. For example, they did not have any opportunities to consult their teachers about homework or tasks they found difficult. One factor that could explain the lack of attention from the teacher's side was mentioned as being the fact that the number of students on the undergraduate level was simply too high. It was thus new for the interviewees to experience being in a relatively small class in the master's degree programme, where the Nordic educator would have time to supervise them individually. Some of the students described the design thinking course as a forum where there would not be any "right" or "wrong" answers. Instead it would be up to each group or student to come up with solutions for how to solve a specific problem. One of the interviewees, Xiao Mei, explained how the design thinking course made her reflect on her former educational experiences:

"I think Chinese students need this kind of education (i.e. the design thinking course), because since we were young, we have been used to many teachers telling us what is right and how things should be. So everyone has forgot how to think themselves. But actually, sometimes the teacher is also just a student. He is also studying, and therefore he cannot be completely right all the time" (Xiao Mei, November 2018).

The interviewees told me that the teachers during their bachelor's studies would teach them a lot of theoretical knowledge that sometimes felt very detached from reality. Some of interviewees described this approach, where only the teacher talks, and nobody interrupts, as being very "stiff" (*siban*). A few of the students had already taken courses about innovation and entrepreneurship at the universities where they studied as undergraduates. Xiao Mei once went to one of these courses, but quickly got tired of it, since the teacher was just introducing stories of successful entrepreneurs to them, which she felt she could not really use for anything. Another interviewee, Gao Peng, once participated in an entrepreneurship competition with a prototype that he had developed with some of his former classmates. They did not achieve any significant result in the competition, which he described as being due to their lack of competences and enthusiasm at that time of the studies. Also, he described that the way some of the teachers at

his university had approached the entrepreneurship competition did not reflect much of what it means to be “innovative”:

“I heard that some of the other teachers had already finished the prototypes themselves, and just let the students follow them step by step, so they could create the same one. There was nothing innovative in doing it like that, but the students could still participate in the competition with these prototypes and even achieve a great result!” (Gao Peng, November 2018).

After Gao Peng had brought up this story in the interview, he was quick to pull it back and told me that we should not talk more about it, since it would just give me a bad impression of how these competitions work. However, he recognized that when the teachers did the tasks for the students, it was a sign that they did not believe in the students’ ability to “think” (*sikao*) themselves. He thus hoped that the teachers would be better at trusting the students.

After becoming familiar with the teaching style of the Nordic educator, the Chinese students generally felt that they got the chance to “think” more, which contrasted their experiences with former teachers who would tell them directly what to do. In this regard, the students’ expressions were similar to those of the Nordic educator who told me that in order that the students can become members of society, they have to take responsibility for themselves and their own learning. The interviewees mentioned that there were a lot of factors which they had to take into consideration, when they developed their prototypes, including financial limitations, market needs and existing products. Compared with prototypes, they had created during their bachelor’s studies, the design thinking course made them spend much more time on the initial phase of the product development, which mainly concerned generating *ideas*. The students described the role of the Nordic educator in this situation as having a “guiding function” (*yindaoxing zuoyong*). Following quote is Xiao Mei elaborating on what this “guiding function” means to her:

“In the process where the teacher guides you and inspires you, you can actually learn a lot. You might only think very superficially about certain things yourself, and the teacher therefore helps you to think more logically” (Xiao Mei, November 2018).

While appreciating having the opportunity to figure out solutions themselves, the interviewees emphasized that the Nordic educator should also have a significant influence on their learning process. Gao Peng even went as far as saying that the educator should “push” the students towards the next step in the development of their prototypes, including help them setting deadlines for finishing tasks. According to Gao Peng, while foreign students’ ability to study on their own might be very strong, Chinese students prefer to receive much more support from the teacher.

Who talks – “We” or “I”: Collaborative processes in group work

The interviewees all pointed out the experience of collaborating in groups as being very new to them. Li Miao said that he had previously only tried to be in groups where at least half of the students would not participate actively. But according to him, in this course things were different:

“In this design thinking course, the educator encouraged all of us to participate. Everyone had to contribute in one way or another. For example, when doing presentations, each student had to stand up and talk” (Li Miao, November 2018).

One of the terms that showed up most frequently, when the students elaborated on their experiences with group work in the course, was “efficiency” (*xiaoliu*). There were two aspects mentioned in relation to this, namely how to divide the roles among the group members and pursue the same goals in order to increase the efficiency of the teamwork.

Most of the interviewees agreed on it being necessary that one student always acts as the authority in the group and makes the final decision. Huang Darong, who had had some experiences from working in teams in a company prior to starting his master’s studies, dreamt about pursuing a career as an entrepreneur by starting his own company. He explained the hierarchical division of roles in teams this way:

“It does not make sense to have a team where everyone is equally strong. What would it be like if four persons tried to do a thing that one person can do by himself? There should only be one person who is strong, and the others can be slightly weaker. This way, everyone will feel that they are improving themselves throughout the entire project” (Huang Darong, November 2018).

Huang Darong felt that the limited amount of time available in the design thinking course made it necessary that one person alone distributed tasks to the other group members. He considered himself as being a person who suited very well to the role of a leader. After all, he had been working for two years before joining the master’s degree programme and was older than the other students. Xiao Mei shared Huang Darong’s opinion of letting one student assume the position of an authority who makes the final decision. She furthermore emphasized that authority is something the other students “give” to you, since they trust you are able to carry the responsibility which comes along.

Besides from letting one student act as the authority in the group, the interviewees mentioned that the success of group work also depends on the group members pursuing the same goal. Ma Xiaoyu said that this factor would make the difference between being a normal team and a “quality team”. In the excerpt from the interview below, Li Miao describes how the ideal process of the group work should be:

“In the beginning, everyone writes their own ideas down, after which they vote for the best idea. That normally works fine. Before really starting the work, the group members can disagree as much as they want, but when the team has decided on what standards to follow, then one cannot say that this way of doing it is bad and think one’s own opinions are much better (...) What I mean is that when a team is in the process of deciding which direction to go, then it is okay to have a dispute going on. But when it has been decided what to do, then everyone, even though they might have different opinions, should not strongly express those opinions” (Li Miao, November 2018).

An interesting aspect to observe during the course, which seems rather paradoxical when comparing to the excerpt from the interview with Li Miao, was the fact that the students had to get used to not saying “I” but “we” when representing their groups. During the first few oral presentations, the groups would often pick out one student – usually someone with good English skills – to present the work of the group. Sometimes, it happened that this student would say “I” instead of “we”, which was corrected by the Nordic educator who emphasized that the group should perform as one team and let everyone talk. Gao Peng clearly remembered how he and the other members in his group had to focus on making “I think” become “we think”:

“This is teamwork, and the thoughts we are presenting is something we have developed as a team. They do not belong to a single person” (Gao Peng, November 2018).

The extent to which the individual student's voice should be heard was a factor that was constantly negotiated in the classroom. The students found it more natural to let one student present on behalf of the other group members, who were maybe not as comfortable about doing oral presentations. However, there were also situations in which the students were not willing to express their individual opinions in the groups. During one session in the class, the Nordic educator told the students to write down their own strengths and weaknesses on a piece of paper and share them with the other team members afterwards. I participated in this exercise, and when I was ready to tell the Chinese students in my group about my insights, they chose to swap papers instead of saying what they had written out loud. I was instantly surprised about their behaviour and could not help interrupting by stating that I thought we were supposed to say the things we had written down out loud to each other. An awkward silence followed, and I felt a need to bring up the incident in the interview with Li Miao who was also in my group:

“If one has to talk about one's “weak” sides, it needs to be together with very close friends, not in a noisy environment. Because when it comes to personality traits, Chinese people tend to display a very reserved attitude. I am sure that when we had to write down our own weaknesses, the Chinese students in our class all felt a bit awkward about it” (Li Miao, November 2018).

When listening to Li Miao's explanation, I realized that it contrasted with the Nordic educator's hope that the students would feel safe about sharing their fears and being vulnerable in front of their teams. Again, this indicated a difference in how the extent to which the individual should be active in expressing his or her own thoughts and feelings was interpreted. Furthermore, while the Nordic educator thought that the lack of confidence might lead the Chinese students to “forget” writing their own strengths down, Li Miao surprisingly stated that sharing one's “strengths” was not problem, since that would just be a matter of telling about all the things you are good at.

In the next section, I will elaborate on how the dilemma between realizing the ambition to create value and navigating within predefined structures in society was negotiated among the Chinese students.

Create value for society and avoid being eliminated: The purpose of becoming innovative and entrepreneurial

Some of the interviewees hoped that the prototypes they developed would create value for society. Those ambitions were among others expressed by Huang Darong who talked vividly about a product he had started to develop with some of his classmates after the design thinking course had ended. The product aimed at solving a problem related to childcare, which he had experienced among close family members. He therefore strongly emphasized that he more than anything else was driven by an inner motivation to make this product successful:

“If you only care about earning money, it is hard to get things done. But if this project is something, you really want to do, you will continue doing it, even though you might encounter difficulties on the way” (Huang Darong, November 2018).

It was clear that Huang Darong wanted this product to benefit people he knew and contribute to the growing market of childcare products in China. This attitude reminded of the Nordic educator's aim that the design thinking course would teach students that their engineering skills have “other value than the value in itself”. He hoped that the students would care more about sustainable development than actually getting rich. At the same time, it was possible to trace a

certain ambivalence in Huang Darong's stance towards factors that can motivate students to engage in courses that teach innovation and entrepreneurship:

"The first thing is that the students need to know that what they are studying is useful; they can do things which are useful to society. But even though it is like that, no one can guarantee that you will be able to get a nice job. You might think about yourself that you are very outstanding, but there are many people out there who are much more outstanding than you are. Combine these two factors, and their attitudes might become more serious (...) China does not suffer from a lack of human talent. They need to know that competition is very tough".

The excerpt from the interview with Huang Darong shows that giving students a feeling that one is doing something good for society is not enough. They also need to be aware that if they do not create products that are "innovative", they will lose the competition against others who do it better than them. This point of view was also expressed by Xiao Mei who talked about why it is necessary to achieve the ability to "innovate":

"If you want people to use your stuff, then you need to innovate continuously. Because everyone is competing against each other, and if there are people who do it better than you, then it means you are going to be eliminated".

In some of the interviews, it was possible to see a connection between students using the master's degree programme as an opportunity to study technologies that are currently prioritized by the Chinese government's political agenda and increasing the chance of finding a good job after graduation. This was expressed in the interview with Wang Liyun, when I asked him what he wished to gain from studying the master's degree programme:

"I hope to create a good foundation for my skills in this area. Within this field of communication (technologies), everyone is currently doing artificial intelligence. Actually, in the past I did not have much to do with that. But now, I am starting over again. It is mainly due to the pressure on the job market that I have chosen to go that way" (Wang Liyun, November 2018).

Artificial intelligence is one of the areas in which the Chinese government expects China to be world-leading before 2025 (Chinese State Council, 2015b). It was also one of the technological fields that the interviewees expressed greatest interest in. Some of the students were aware that the huge amount of financial support which is currently being allocated to artificial intelligence makes it a highly attractive technology to obtain knowledge about. However, whereas Wang Liyun felt that he needed to become familiar with artificial intelligence in order to be competitive on the job market, Ma Xiaoyu expressed that he was driven by a desire to make a contribution to this field. His dream was to find a way to create a harmonious co-existence between human beings and the machines, which he explained this way: *"Artificial intelligence will never substitute humanity. Rather it should be seen as humanity's assistant"*. Ma Xiaoyu did not experience a dilemma between realizing his own ambitions and navigating in structures, which in this context are defined as technological areas currently favoured by official Chinese agendas. On the contrary, for him those structures were consistent with the feeling of being able to generate value to society.

Summing up: Three dilemmas in which the role of the individual is negotiated

In the sections above, I first show how the role of the individual is negotiated in relation to the students' former educational experiences, in which they often had to obey the teacher as an authority who knew the right answer. All the students I interviewed enjoyed "breaking out" of that dependent role and move towards being more independent. A dilemma was here indicated

when a close relationship between the students and teacher was also emphasized as being important, especially in relation to pushing students towards the next step in their learning process. Secondly, I demonstrate the existence of a dilemma in the way that the students were willing to let certain group-members express their individual voices when it came to be making the final decisions or presenting the work of the group in front of the class. But in situations in which the students had to share feelings that were more personal, and the teams had already decided on an idea, the influence of individual voices was less welcome, since it could potentially have an impact on the group's ability to work efficiently. Finally, a dilemma was faced when the students expressed that innovation and entrepreneurship is the outset for creating something that one finds interesting and meaningful, while also being aware that studying innovative and entrepreneurial practices is necessary for being able to cope with the structures of a competitive job market. This, however, should be nuanced by the insight that there are students who feel they are able to generate value and contribute with knowledge to areas that are determined by other structures in society, such as political agendas.

The three dilemmas show that the expected outcomes of the Chinese government's educational policy are both being internalized and challenged. The students, on the one hand, identified themselves as autonomous learners, who wanted to demonstrate independent thinking skills. On the other hand, they also emphasized the importance of one student taking leadership of the group and the progress of the teamwork over the individual student's impulse to pursue alternative ideas. In the final section, I will elaborate on how the results of this study generate new perspectives with implications for research on as well as approaches to teaching innovation and entrepreneurship education.

New perspectives on educating the innovative and entrepreneurial individual

The didactic principles that characterized the design thinking course tally with the educational approaches that official Chinese policies hope can put an end to "age-old malpractices" in the Chinese education system. The students were thus encouraged to think independently, to collaborate and participate actively in class as well as upgrade their problem-solving skills by engaging in a simulation of real-world entrepreneurial undertaking. The results of the study lead us to consider the following questions:

Firstly, the study calls for a deeper investigation of the social interactions and group dynamics taking place in the institutions tasked with teaching innovation and entrepreneurship in China. Among others, there is a need for finding out what factors decide who will assume the role of an authority in the groups, and whether hierarchies among the Chinese students are decided by friendships, performance, gender or something else. Furthermore, it is relevant to investigate to what extent the students consider these hierarchical relationships as being an important part of their learning process.

Secondly, it is necessary to uncover in further details what constitutes the essence of the Chinese educational tradition, including whether this tradition can be related to the process towards becoming "creative". The interviews showed indications that students have internalized the discourse which emphasizes rote learning and doing what the teacher says as contrasting what it means to be creative and innovative. This differs from educational approaches in China (and the West) in which memorization and repetition have been regarded as the foundation for creating something new (Bakken, 2000). Will we see a situation where the Chinese educational tradition continues to be criticized for hindering creative thinking, whereas approaches originating in the Western world are seen as valuable models to follow? Or will we see a situation

in which the educational tradition in China becomes recognized for being a necessary element in teaching innovation and entrepreneurship with Chinese characteristics? Those questions will become more relevant to ask as the educational campaign permeates deeper into the Chinese higher education sector.

Finally, we need to further investigate how university students ascribe meaning to innovation and entrepreneurship education. As we can see from the interviews with the Chinese students, it is possible to talk about the existence of a double-bind, where they have to engage in practices that the policy of innovation and entrepreneurship also aims to counteract. That is, instead of allowing the students to pursue their own field of interest in a pace that suits them individually – without being afraid of making mistakes – the educational policy reinforces the fact that the students need to compete against others that want to obtain the same innovative and entrepreneurial skills as them. This relates to an argument proposed by the Chinese-born, American anthropologist, Yunxiang Yan, who states that the Chinese society is dominated by striving individuals, of which many join the rat race to success, because they do not want to bear the negative consequences of failure (Yan, 2013). It is thus essential to ask whether students, as the popularity of innovation and entrepreneurship education continues to grow, become more focused on writing these skills on their CVs, rather than understanding the deeper meaning of the concepts.

- ABRAMI, R. M., KIRBY, W. C. & MCFARIAN, F. W. 2014. Why China Can't Innovate. *Harvard Business Review*, March.
- ANDERSON, A. R. & ZHANG, X. 2015. Enterprise education with Chinese characteristics; policy, practices and uneven development in PRC. *Journal of Entrepreneurship in Emerging Economies*, 7, 276-292.
- BAKKEN, B. 2000. *The exemplary society : human improvement, social control, and the dangers of modernity in China*, New York, Oxford University Press.
- BLINKER, P., ELMHOLDT, S. T. & THRANE, C. 2017. How can I, as an entrepreneurship educator, contribute to changing a “learning for exam” practice into a “learning for life” practice? *ECSB Entrepreneurship Education Conference (3E 2017)*. Cork Institute of Technology, Cork, Ireland.
- BREGNBÆK, S. 2010. Den kinesiske drøm om Harvard. *Tidsskriftet Antropologi*.
- BREGNBÆK, S. 2011. A public secret: 'education for quality' and suicide among Chinese elite university students. *Learning and Teaching: The International Journal of Higher Education in the Social Sciences*, 4, 19-37.
- BREGNBÆK, S. 2016. *Fragile elite : the dilemmas of China's top university students*, Stanford, California, Stanford University Press.
- CHINESE STATE COUNCIL, C. S. 2015a. Chinese State Council's suggestions for deepening the reform of innovation and entrepreneurship education in higher education institutions, transl. In: COUNCIL, C. S. (ed.). Beijing.
- CHINESE STATE COUNCIL, C. S. 2015b. Made in China 2025. In: COUNCIL, C. S. (ed.). Beijing.
- FAN, Y. Z., XING & QIU, Y. 2013. The State of Entrepreneurship Education in Universities in Shanghai, China: A Survey from Students' Perspective. *Creative Education* 4, 92-97.
- FOREIGN POLICY, F. 2015. Why do Chinese lack creativity? *Foreign Policy*, June 23.
- FREDERIKSEN, S. H. 2017. *Learning to become entrepreneur(ial) : New perspectives on enterprise education in practice*. Aarhus University.
- KIPNIS, A. B. 2011. Subjectification and education for quality in China. *Economy and Society*, 40, 289-306.
- KVALE, S. 2007. *Doing Interviews*, Los Angeles, Sage Publications.
- LEE, R. M. & YUAN, S. 2018. Innovation Education in China: Preparing Attitudes, Approaches, and Intellectual Environments for Life in the Automation Economy. In: GLEASON, N. W. (ed.) *Higher Education in the Era of the Fourth Industrial Revolution*. Palgrave Macmillan.
- LI, K. 2015. Chinese Premier Li Keqiang's speech at Davos 2015. World Economic Forum.
- MOK, K. H. & KAN, Y. 2013. Promoting Entrepreneurship and Innovation in China: Enhancing Research and Transforming University Curriculum. *Frontiers of Education in China*, 8, 173-197.
- OECD 2018. The Future of Education and Skills - Education 2030.
- ROBINSON, S., NEERGAARD, H., TANGGAARD, L. & KRUEGER, N. F. 2016. New horizons in entrepreneurship education: from teacher-led to student-centered learning. *Education + Training*, 58, 661-683.
- ROSS, H. & WANG, Y. 2016. What does innovation mean and why does it matter? Innovation in Chinese Higher Education in a Global Era. In: GUO, S. & GUO, Y. (eds.) *Spotlight on China: Changes Education under China's Market Economy*. Rotterdam: Sense Publisher.
- ROWLEY, C., FOOK, J. & GLAZZARD, J. 2018. Adopting a student-led pedagogic approach within higher education: the reflections of an early career academic. *Reflective Practice*, 19, 35-45.

- SPRADLEY, J. P. 1980. *Participant observation*, Australia, Wadsworth, Thomson Learning.
- TANG, M., CHEN, X., LI, Q. & LU, Y. 2014. Does Chinese university entrepreneurship education fit students' needs? *Journal of Entrepreneurship in Emerging Economies*, 6, 163-178.
- THØGERSEN, S. 2012. Chinese students' great expectations: Prospective pre-school teachers on the move. *Learning and Teaching: The International Journal of Higher Education in the Social Sciences*, 5, 75-93.
- TIMES HIGHER EDUCATION, T. H. 2016. Chinese students at top universities "less creative than others". *Times Higher Education*.
- WU, H. & BENSON, S. A. 2017. Made In China 2025 and New Trends of Entrepreneurship Education of China: A Socio-Economic-Educational Perspective. *Asian Education Studies*, 2, 10-19.
- XU, X. 2012. Analysis of national policies for entrepreneurship education in China. *Globalisation, Societies and Education*, 10, 403-420.
- YAN, Y. 2013. The Drive for Success and the Ethics of the Striving Individual. In: STAFFORD, C. (ed.) *Ordinary Ethics in China*. Bloomsbury.
- ZHOU, M. & XU, H. 2012. A Review of Entrepreneurship Education for College Students in China. *Administrative Sciences*, 2, 82-98.