E

Education

EXPLORING MOBILITY OF KNOWLEDGE AS AN APPROACH TO INTERNATIONALIZATION IN HIGHER EDUCATION DURING AND BEYOND UNCERTAIN TIMES

Sajjad Pouromid[1*], Elvita Wiasih[2]

[1]Institute for Innovative Global Education, Kansai University
[2]Institute for Innovative Global Education, Kansai University
[*]**Corresponding author, E-mail:** pouromid@kansai-u.ac.jp

Abstract

The current COVID-19 global pandemic has posed unprecedented challenges to internationalization in higher education. Most internationalization abroad programs have been canceled altogether, and internationalization at home attempts have also suffered from the closure of campuses and the absence of international students in many universities around the globe. Against this backdrop, the present article introduces the emerging model of internationalization at a distance and the idea of mobility of knowledge that accompanies it. The present position paper argues that such an approach can help universities maintain international education during the current uncertain times. It also elaborates on and provides examples of collaborative online international learning as a cost-effective and sustainable approach that can facilitate mobility of knowledge. As the area is less explored in terms of empirical research, suggestions are made towards the end of this paper for assessing the impact of mobility of knowledge on higher education with a data-driven approach.

Keywords: Higher education; Internationalization; Mobility of Knowledge; COIL

Introduction

The increasing demands of globalization have made it necessary for higher education institutions to embark on internationalization. This would not be far from expectation due to the strong influences neoliberal views have exerted on higher education. For an institution to survive in a highly competitive market, it has to cater for the growing needs of the situation. One such demand is that universities can no longer depend on domestic students. They need to develop strategies to attract students from overseas as well. Of equal importance is the fact that even domestic students might no longer be merely interested in acquiring domestic level skills. In other words, along with the increasing student mobility prospects and possibilities worldwide, it is understandably expected from universities to prepare students to compete for job opportunities globally. In order to achieve these two goals, universities need to come up with new ways both to become internationally recognized and to enhance the international experience of their faculty, staff and students. In response to these demands, many universities around the globe have come to recognize their role in promoting international and intercultural abilities in their students (de Wit, 2010). In what follows, a number of issues related to internationalization in higher education will be discussed:

OUTLINE

1. Internationalization: Definition and approaches

Conventional approaches to internationalization in higher education are introduced and evaluated with reference to the challenges internationalization has witnessed during the current global pandemic.

1.1 Emerging categories of international education

Internationalization at a Distance (IaD) is introduced and compared to conventional internationalization approaches namely Internationalization Abroad (IA) and Internationalization at Home (IaH).

1.2 Collaborative Online International Learning and Internationalization

Collaborative Online International Learning is introduced as a cost-effective and sustainable practice that can contribute to internationalization in higher education and mobility of knowledge.

2. COIL in Practice
   2.1 Example 1: Kansai University and University of Washington
   2.2 Example 2: Kansai University and Clemson University
3. Conclusion

Internationalization: Definition and approaches

Internationalization has taken different forms and hence has been defined in several ways. However, one of the most cited definitions of the concept is the one by Knight (2004) who stated that internationalization is the "the process of integrating an international, intercultural, or global dimension into the purpose, functions or delivery of post-secondary education" (p. 11). The definition is particularly interesting because it explicitly denotes internationalization as a process and explicitly refers to international and intercultural aspects of this process. It also seems to be broad in scope encompassing almost any activity at the level of planning or implementation. Knight (2006) further explores the concept setting distinctions between Internationalization Abroad (IA) and Internationalization at Home (IaH). Internationalization Abroad, according to her, is characterized by education taking place across borders, mobility of students, teachers, scholars, programs, courses, curriculum and projects. On the other hand, she argues, IaH comprises activities designed to provide students with the chance to develop intercultural awareness and international understanding while residing in their home countries. The distinction is not free from controversy though.

Beelen and Jones (2015), for instance, call the distinction problematic due to the fact that it implicitly suggests that IA is incapable of developing international and intercultural skills in students, and that IaH is merely done through implementing activities in the absence of a unifying core curriculum. Knight (2006) of course refers to other factors related to IaH including the international/intercultural dimension of the curriculum, research collaboration as well as area and foreign language studies. Her incorporation of curriculum into the idea of IaH opens up new discussions regarding how this is to be achieved. Responses to this question would vary ranging from proposing solutions through internationalizing curriculum to campus internationalization. The Organization for Economic Co-operation and Development (OECD) defines internationalized curriculum as the one "with an international orientation in content and/or form, aimed at preparing students for performing (professionally/socially) in an international and multicultural context and designed for domestic and/or foreign students" (OECD, 1996, p. 6). Campus internationalization is also often used interchangeably with comprehensive internationalization as proposed by Hudzik (2011). According to him, comprehensive internationalization is best conceptualized as a commitment realized through action encompassing all aspects of teaching, research and services in a higher education institution. It is hence not limited to the campus life of students and should be instead extended to the institutions' "external frames of reference, partnerships, and relations" (p. 6).

The main goal of IaH would be to enable local students to experience international higher education in the absence of mobility. One of the first instances of such a proposition can be seen in the paper published by European Association for International Education (Crowther at al., 2000) which expanded the definition of internationalization and delivered a more comprehensive one encompassing university internationalization rather than being merely concentrated on student, staff and researcher mobility and international collaborations (Knight, 2004). This was quite interesting since student mobility programs are often reported to be dominated by students from socially advantaged families with the economic and cultural capital necessary for supporting a student living and studying abroad (Brooks & Waters, 2011). For this reason, IaH is believed to offer "a democratization of the benefits of internationalization to a much wider segment of the society than that which could be, or wanted to be, geographically mobile" (Harrison, 2015, p. 414). IaH as envisioned by Crowther et al. (2000) had three major components.

First was the consideration of diversity as a resource. The idea here is that internationally mobile students can create a space in universities which is both socially and academically more diverse. This diversity can then be regarded as a potential resource for home students, which enriches their academic experience by making it possible for them to study in an educational setting different from that of their own country. Second was the existence of an internationalized curriculum which benefits from the addition of different cultural perspectives to the existing more conventional curriculum. The third component was culturally sensitive pedagogy which required universities to consider their culturally and internationally diverse students as a resource and cater for their specific needs. (Harrison, 2015).

A review of the existing literature on IaH provides evidence in support of these goals. It is worth mentioning that counting out the benefits of IaH is supposed to underrate the value of study abroad programs. Moreover, no matter what the potential benefits of IaH are, higher education institutions may not be willing to discourage their students from studying abroad for obvious financial reasons among other issues. Research has in fact shown that despite evidence suggesting that not all study abroad program will by default equip participating students with intercultural and global skills, such programs have remained popular among higher education institutions (Hammer, 2012). There are short term study abroad programs that are branded as programs that strive to increase intercultural awareness among students, yet in reality prioratize travel experiences over learning (Stigger, Wang, Laurence & Bordilovskaya, 2018). The study abroad landscape has, however, transformed drastically since March 2020 and due to the rising concerns over the COVID-19 global pandemic.

The 2020 academic year witnessed unprecedented challenges with strict travel bans in place as measures to curb the spread of the COVID-19. Much to the disappointment of the students who had prepared themselves to venture study abroad, various countries across the globe decided to limit entry into their borders without considering international students as an exception. Even now, more than a year into the pandemic, the future has remained more or less the same. The second and third waves (possibly among many more to come) of the infection have convinced local and national governments in many parts of the world to keep their international travel restrictions in place and all this means one thing for IA in general and study abroad programs in particular: a grim present and an uncertain future. A number of pharmaceutical companies have managed to roll out promising vaccinations for the disease, but the current situation for IA is yet anything but promising. The question often asked in the current atmosphere is what if the situation does not resolve anytime soon? Are we going to give up our hopes on IA and all we thought it could help our students achieve? Probably not. Even in this relatively short time since the beginning of the pandemic, higher education has witnessed innovations that has made it possible for education to go on against all odds. Campuses were closed earlier in the spring of 2020 and many have remained closed to date. Nevertheless, this has not been an end for education, and many believe, neither will it be for internationalization in higher education. The only (vital) question that needs to be answered is how? In order to answer this question, one needs to think outside the box. If conventional models of international education do not work under the current global pandemic circumstances, why not come up with new models?

Emerging categories of international education

IA and IaH have so far been the dominant approaches to internationalization of higher education. This binary distinction has come under criticism recently, however. As discussed earlier, the current pandemic has stymied IA attempts by and large. For IaH things have not been any easier either. With the closure of many campuses to students, on campus internationalization has been very hard to maintain. To add to the problem, absence of international students from campuses meant that regular students had very few opportunities (if any) to gain international exposure. It was amid such a context that attention was directed to the internet technology as the only viable and potentially sustainable means to internationalization. Even prior to the pandemic, higher education had witnessed an increase in the number of students making use of distant education via the internet in its different forms (Tait, 2018). It can be argued that distant learning has been contributing to the development of a new form of international education in which students have been learning "through institutions based in a culture or country distant from their own, while simultaneously remaining within their own country of residence" (Mittelmeier et al., 2019). The roots of this category can be traced back to Ramanau's (2016) proposal for an approach to internationalization called Internationalization at a Distance (IaD). The approach which was later on developed and expanded (Mittelmeier et. al, 2019; Mittelmeier et. al, 2020), blended Kinight's (2008) IA and IaH approaches and made it possible for students residing in their home countries to receive education from an overseas institution. As was mentioned earlier, mobility was an indispensable aspect of IA. Students would have to leave their home countries to enroll in an overseas institution for a certain period of time. In IaH, by contrast, international dimensions were incorporated into the curriculum of home campuses with the hope of giving students international exposure without burdening them with the cost of traveling abroad (Beelen & Jones, 2015). In other words, contrary to IA, in IaH students received education from a university in their country of residence or origin. The emerging approach of IaD seems to share features of both of these conventional approaches. That is to say, although students are not mobile and keep residing in their country of residence, they will receive education from an overseas institution. The absence of mobility in IaD resembles IaH and receiving education from an overseas institution is akin to IA. Needless to say, such an approach can have great potentials for keeping international education in place during a global crisis. Students with access to the internet and the necessary devices are at least theoretically able to receive international exposure despite all difficulties associated with the current pandemic situation. Instead of students, faculty, and staff, it is knowledge that has become mobile within an IaD approach with the help of technology (Mittelmeier et. al, 2020).

IaD helps those students who desired to achieve international experience but could not travel abroad receive education from an overseas institution. Yet IaD's potentials can be more far-reaching than that. In a world that university partnership in various forms has become commonplace, it can be expected that IaD can lead to the development of various other practices. One such practice can be dual enrollment for students. Partnering universities may be able to develop shared curricula that enables students to take courses at both universities simultaneously regardless of where they are living. They can even receive credits for the courses they have taken if such a system is defined and developed by the two (or more) partnering institutions. It may also be possible for instructors from partnering universities to team-up and offer courses in the form of team teaching. Depending on the circumstances of any particular university or program, some of the features of IaD can be adopted.

After all, IaD is not a one-size-fits-all approach. What works for one institution, may not necessarily work for others. One would even argue that the very assumption that all students and universities have access to the internet is fallacious. This is a legitimate concern indeed. However, issues with infrastructure cannot be considered a drawback for the IaD approach. For sure IaD cannot be realized if the infrastructure is not available. Yet even without IaD, the lack of infrastructures is a serious obstacle for education. National governments and international institutions in charge of education need to take measures to tackle such issues. What can be done meanwhile, however, is to make international education accessible for students in different parts of the globe as much as possible through adopting cost-effective and sustainable educational practices. One of such practices that has been around in global education for nearly a decade but has gained momentum in the past few years is Collaborative Online International Education (COIL).

COIL and internationalization

COIL can be regarded as an innovative teaching approach with the central aim of providing students with the opportunity to collaborate with peers studying at overseas universities in order to develop their understanding of the subject matter as well as increasing their intercultural awareness. Similar to other practices within an IaD approach, students do not need to be mobile in a COIL program as the goals of COIL are achieved with the help of various information and communication technology (ICT) tools. The application of ICT tools, however, cannot be counted as a distinctive feature for COIL. These tools have been in use both in formal educational settings and in lifelong learning projects for the past two decades. An example for this is the use of ICT tools in massive online open courses (MOOCs) which have made educational materials accessible for learners in different geographical locations. Another case in point is distanced learning which enables students to access lectures by instructors residing overseas.

These two examples have a fundamental difference with what COIL has to offer. MOOCs and distance learning programs lack the collaborative dimension which lies at the heart of COIL. Moreover, in many cases COIL offers students the chance to experience cross-disciplinary education. Classes with rather different subjects can pair up, develop a syllabus that shares the concerns of both of them and initiate a COIL project. This gives students the ability to view the subject matter from a (completely) different angle. Looking at the subject from a different perspective can be regarded as a much-needed skill in a world that is increasingly becoming globalized as the sheer fact of possessing knowledge in one particular area may not offer students good employment prospects. In contrast, students who possess skills such as global citizenship, cross-cultural competence, and digital literacy besides the knowledge of their field of study will be in a better position to pursue their desired careers after graduation. Engaging students in COIL can be an opportunity for training them with such skills. What is more, the very collaborative component of COIL can be absolutely beneficial for the development of career prospects in students.

The very fact that this approach assigns active roles to students while accentuating the effects of collaboration on learning makes it suitable for improving employability in students in higher education. Students who take part in collaborative learning will have the privilege of acquiring the skills to work with others, to think and reflect critically, to express their opinions and communicate their knowledge, and to manage and evaluate themselves and others. All of these skills, possibly among others, can be ideally transferred to the workplace, which in other words means that once graduated, students are equipped with the skills and knowledge that can boost their readiness to work and employability prospect. The literature on virtual exchange (O’Dowd, 2018) in general and COIL in particular has shown how these approaches enable students to acquire group work skills (Lindner & O'Brien, 2019) and improve their digital literacy (Hauck, 2019).

In a typical COIL project, two (or more) classes at two (or more) universities across national borders team up to create an environment for their students in which their cross-cultural understanding and knowledge of the subject matter can be improved (Shiozaki, 2016). Although the original goal of COIL was to bring students from distant ideas together and promote intercultural exchange among them, it can also be a solution for maintaining international education during uncertain times when student mobility is no longer a viable option. Rubin and Guth (2015) argue that COIL is not simply a platform for intercultural communication; rather that it is a paradigm for the development of cross-cultural understanding across various shared multicultural learning settings.

A wide range of internet-based tools can be used in a COIL project to link university classes in geographically distant areas to help teachers and students engage in meaningful intercultural exchanges. A COIL project usually starts with at least two teachers in the two collaborating universities sharing their course syllabi and then developing a shared syllabus for the project with an emphasis on students' experiential and collaborative learning. The two (or more) courses in a collaboration do not necessarily need to be within the same discipline. What matters most is having common grounds in and a shared understanding of course objectives. Activities and tasks in the COIL project can be designed in a way that can benefit the students in both classes. Ideally, and if time zone differences and other constraints allow, it is good for students to be able to interact with each other over a video conferencing platform in real time. However, not all sessions have to be held synchronously online, and students can collaborate with their international partners asynchronously as well. Also, there may be traditional lectures and teacher-led sessions co-taught and managed by teachers from partnering universities. The online (or otherwise) collaborative sessions can come in between these sessions. It is, therefore, possible to consider COIL as a context-sensitive framework that can be adapted to the specific needs and expectations of the setting in which it is being employed.

Depending on the overall aim of the course, COIL can take different forms. While live collaboration facilitates interactions among learners for the development of linguistic competencies online, for other courses textual or multimodal exchanges among students can be a better option. For a project to be considered COIL it needs to satisfy four criteria. First and foremost, the activities and tasks students will be engaged in have to be collaborative. Students from the two (or more) universities need to work collaboratively towards the completion of a predefined task. Second, the project needs to be done online. This can include both synchronous and asynchronous interactions taking place among the students and the teachers. Third, the project needs to take place between two or more higher education institutions from across national borders, meaning that a project between two universities within one country will not count as COIL. Finally, the project needs to have a clear statement of the intended learning outcomes. In what follows, examples from COIL projects recently competed at Kansai University will be given to illustrate how it has contributed to maintaining international education at this university despite the current uncertainties and constraints imposed by the COVID-19 pandemic.

COIL Example 1: Kansai University-University of Washington

Theme: Understanding the interface between social psychology and language

This COIL took place in the Fall semester of the 2020 academic year between a linguistics course at Kansai University and a social psychology course at University of Washington, Tacoma. It was a short COIL taking place over a month. Although there is no strict guideline for the length of collaborations, regular COIL projects often take a month and a half to two months. In this particular example, however, since the US partner was near the end of their quarter, longer collaborations were not feasible. What makes COIL a sustainable model for international education is this flexibility. Taking into account the particular circumstances of the partnering universities, they can make decisions about the specifications of their project. As far as the COIL in this example is concerned, the two instructors had several meetings prior to the initiation of the project in order to come up with shared concerns and learning outcomes, based on which a shared syllabus could be formed. This stage is an essential one in inter-disciplinary COIL in which the two instructors are not teaching the same subject matter.

One of the main objectives of the linguistics course at Kansai University was to familiarize students with the many subtle ways in which language frames our consciousness and assigns meaning and value to the world around us. In order to achieve this goal, the course started from an analysis of the building blocks of the human language and its different components and then moved towards how language is actually used in society. The course also kept a focus on English and Japanese comparing the two languages in phonology, word formation, syntax, semantics, pragmatics and discourse. As mentioned earlier, the class was involved in a four-week COIL project with a social psychology course from University of Washington Tacoma, in which students from both universities formed groups and carried out collaborative projects. After an introductory ice-breaker task, the mixed nationality groups worked on their projects on the topics of linguistic and cultural relativism, communication in individualistic and collectivist cultures, methods of persuasion across cultures, and cultural differences in the expression of emotions. The final output of the project also took different forms including video production, online magazines, podcast episodes, and recorded presentations. Table 1 summarizes the stages involved in this COIL.

Table 1: Details of the KU-UW COIL project

Stage	Time Frame	Activity	Theme	Platform
Icebreaker	Oct 26-Nov 1	Video	Self-intro/COVID-19 challenges	Padlet
Collaboration	Nov 2-Nov 15	Video production Podcast Magazine Presentation with voiceover	Linguistic and cultural relativism Communication in individualistic and collectivist cultures Advertisement and methods of persuasion across cultures and languages	Padlet
Wrap-up	Nov 23	Online meeting	Experience sharing/Q&A	Zoom
Reflection	Nov 25	Essay	What was learned	LMS

As the table indicates, this COIL project comprised four main stages. It started with an ice-breaking stage during which students in the two classes had the opportunity to get to know who they were collaborating with. This stage has proven to be very influential in how the other stages unfold later on, as building good rapport and interpersonal relationships can facilitate collaboration among students. In this particular COIL, students were asked to record self-introductory videos of themselves and post it on the Padlet platform (www.padlet.com). Figure 1 illustrates the Padlet page used in this COIL.

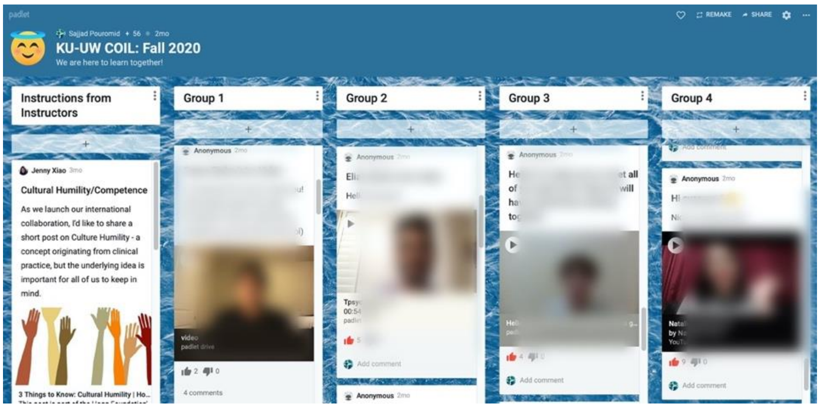


Figure 1: Self-introductory videos posted on Padlet in the icebreaking stage

As figure 1 shows, students were divided into multinational groups and before starting their collaborations, posted icebreaking videos of themselves on this Padlet page. Padlet provides a flexible workspace for student groups to share projects and interact with each other about the projects posted. In the self-intro videos, students talked about themselves and the challenges they had faced during the COVID-19 pandemic. Other students were then encouraged to leave comments on their peers' videos and interact with them to build stronger relationships. Once this stage was concluded, the collaboration stage started which went on for about two weeks. In this stage, students were required to bring in the knowledge they had acquired in their courses and collaboratively carry out a project after selecting one of the themes offered to them. The themes included linguistic and cultural relativism, communication in individualistic and collectivist cultures, and advertisement and methods of persuasion across cultures and languages. One of the key goals of the project shared by all of the three themes was to understand the interface between social psychology and linguistics. This lay at the heart of this COIL as the two groups of students could resort to what they had learned in their own courses to contribute to the project. This could arguably widen the students' perspective in each class by giving them the chance to view the topics from a different angle. Each group of students would schedule meetings to meet up and discuss different aspects of their projects in their spare time. They also made use of collaborative work tools and spaces such as Google Drive to keep track of the progress they were making. They could select the type of project they wanted to submit from among a number of choices including video production, podcast, magazine and presentation with voiceover. At the end of this stage, they were asked to post their projects on the same Padlet used in stage one. Figures 2 and 3 illustrate two of the activity types submitted by the groups.

Figure 2: Presentation with voiceover

Students could opt for a presentation with voiceover as one of the activity types defined for the collaborative stage of this COIL. As Figure 2 indicates, in this activity type, students would create PowerPoint slides and record their voice for them. In this particular example, the students in one of the groups discussed differences in communication styles in collectivist and individualistic cultures.

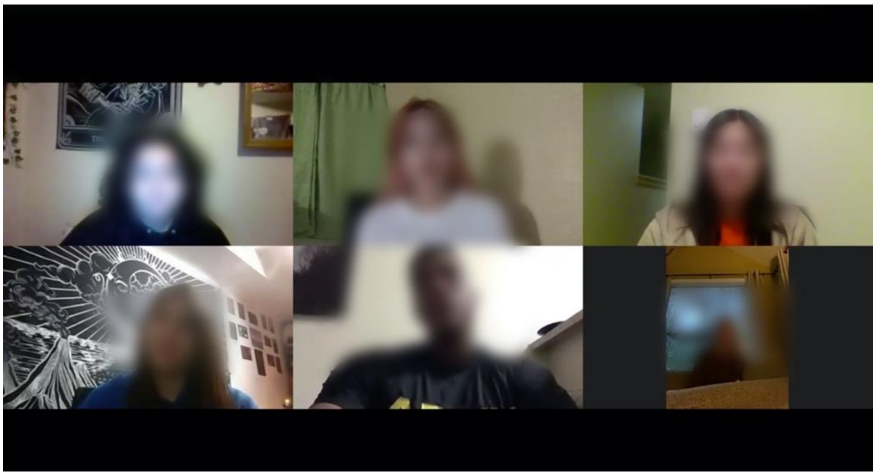


Figure 3: Video podcast

As can be seen in Figure 3, video podcast was another option for the activity types the students could choose from. In a podcast, (audio or video) students would discuss the results of their collaborations for a longer period of time compared to a presentation. This allowed them to cover a wider range of issues in their discussions. Furthermore, it was a more interactive activity, in which students could critically comment on each other's perspectives and express their opinions about various arising topics.

Once the collaborative stage was concluded and all projects were posted on Padlet, students were required to read/view other groups' projects and prepare questions to ask during a live online wrap-up meeting. During the meeting, which took place over Zoom, students asked and answered questions about various aspects of their own project and the projects submitted by other groups. They were also asked about their experience doing the project with international partners living in time zones completely different from theirs. For almost all students, this was the first COIL experience, and this wrap-up session was designed to help them reflect on this learning experience.

The final stage of the project was reflection, in which students were required to write a short essay reflecting on the positive and negative aspects of their collaboration. The reflections were only sent to the two professors and were not made available to all students. Even after the project was concluded, the students were encouraged to keep in touch with their international peers as building networks and relationships was also one of the goals of this COIL pretty much the same as any other COIL.

COIL Example 2: Kansai University and Clemson University

Theme: Staying Connected Amidst COVID-19 Outbreak: Documenting the Early Outbreak and its Impact to Student's Life in Japan

Early in 2020, the world was taken aback by the coronavirus outbreak. In the attempt of containing the spread of the virus, strict travel bans were ordered by countries around the world. One of the impacted sectors by this travel ban policy was study abroad programs. To this date, study abroad programs have not been resumed. In order to "replace" the study abroad programs, many institutions turn to virtual exchange. Thus the increased interest and emerging virtual exchange initiatives among higher education institutions across the globe.

Kansai University is not a stranger to COIL (Collaborative Online International Exchange)/ VE (Virtual Exchange) practice. Kansai University, through its KU-COIL initiative has been enhancing some of its global classrooms with the COIL method since 2014. In 2019, Kansai University transformed its KU-COIL initiative to a bigger scope of project under IIGE (Institute for Innovative Global Education). One of the IIGE programs was the COIL plus program, where the physical mobility of students is embedded in the COIL exchange program. Unfortunately, this newly launched program has to be halted due to travel restrictions and health concerns of the students. Thanks to the past COIL experience, Kansai University is equipped and ready to respond and swiftly adapt to the new challenges. Kansai University was able to offer COIL partnerships to its overseas partner universities to make up the canceled physical mobility. One of the COIL projects developed in response to the cancellation of study abroad programs to Japan was collaboration with Clemson University. This COIL project was designed to substitute the study abroad program to Japan in Spring and Summer that got cancelled due the travel restriction.

COIL Project Design: Topics and Tools

The main objective of this collaboration was to provide the opportunities to practice their target language (Japanese for Clemson University students and English for Kansai University students). Over the course of roughly 5 weeks, participating students were encouraged to communicate with their overseas counterparts in English and Japanese. They were paired up in five virtual teams consisting of students from each collaborating university. Rather than choosing alternatives to what we cannot do in the time of physical distancing, the final project chosen for this particular COIL exchange was something that can be done unique to the time when the collaboration happened. Clemson University students were to interview Kansai University students about how their life changed and affected by the coronavirus outbreak. Due to the time difference and student's language proficiency, real time interviews were deemed to be non beneficial for the project. The interviews were done via a video messaging app called Flipgrid. Clemson University were to prepare their questions in Japanese beforehand, record themselves asking the questions that had been checked by their Japanese language teacher, and upload it to Flipgrid. Kansai University students will then watch and prepare their responses in English and/or Japanese, record their responses and upload it to Flipgrid. For students whose language proficiency is low, asynchronous communication provides them time to listen and compose their response which usually leads to reducing the pressure of listening and providing response right away as what is natural in a synchronous communication. Video messaging enables them to see their counterparts facial expressions, although in this case, some students were actually wearing a mask when recording their video. Clemson University students will then edit the videos, add English subtitles, and put them together into a short documentary about Japan at the beginning of the coronavirus outbreak.

Prior to engaging in this activity, all students were to upload a video introduction about themselves. Kansai University students were specifically asked to put together a video presentation introducing Kansai University and its campus life to Clemson University students. At the end of the collaboration, participating students were asked to do a reflection about the COIL project and commentary on the final project.

Table 2 summarizes the different stages in this COIL as well as the time frame, type of activities, the instructions the students received and the platform they used for submitting their projects and discussing them with their peers. Figures 4 and 5 also provide screenshots of students' submissions for different stages in the project.

Table 2: Details of the KU-CU COIL project

Stage	Time Frame	Activity	Instructions	Platform
Icebreaking	May 12-May 19	Video	Say hello (max. 90 seconds) - KU posts self-intro videos by 5/12JST. CU watches and responds to each video as if meeting them (chain video). English.	Fligrid
Information Exchange/ Collaboration	May 19-June 15	Video	- CU posts video questions to FligGrid by 5/19JST. - Explain situations in the US in English, ask questions in Japanese. - KU posts video responses (in Japanese and/or English) - CU receives KU recordings by 5/27 JST - Followup questions from CU by 6/1 - Followup responses from KU by 6/8 - Clemson presentation (documentary video, presentation) to be completed by 6/15	Flipgrid
Reflection	June 15-June 26	Video	- Watch party - Take away and challenges	Flipgrid

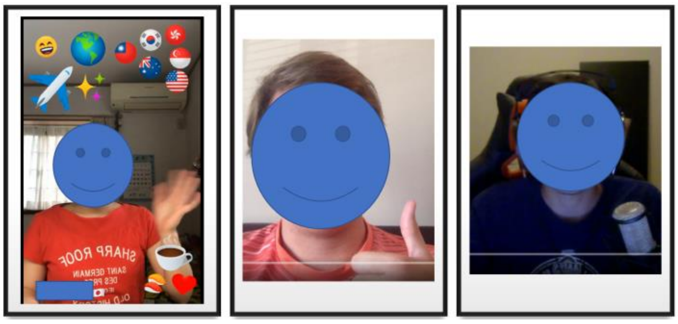


Figure 4: KU and CU self introduction videos on Flipgrid

This icebreaking activity was set up so that students posting their self introduction video as a chain response to the other's self-introduction, in hope that it will be as close as a real time communication.

Figure 5: Screenshot of the short documentary video

The final project was uploaded to unlisted YouTube for limited viewing. Kansai University watched the video and shared their commentary via Flipgrid. Despite the lack of real time communication, KU and CU students gave positive feedback to the experience. Video messaging exchanges in this particular instance actually gave a better insight to the language because students were able to listen over and over again and look up for words they never heard before. Clemson University students, while missing the physical mobility component from the study abroad program, responded positively to the experience because they were able to hear from Japanese and international students at Kansai University. After the collaboration ended, Clemson University continued with a virtual Japanese language club and Kansai University students were invited to participate in the club virtual meetings. This was set up so the exchange continues beyond the COIL project.

Conclusions

Internationalization in higher education is currently experiencing fundamental dilemmas. The COVID-19 pandemic has stymied various internationalization attempts in universities across the world. Study abroad programs have been canceled and internationalization at home attempts have had their own challenges. This, however, does not mean that higher education institutes and students will have to give up their hopes for gaining international experience and exposure. This article explained how internationalization at a distance (IaD) as an emerging approach to internationalization has made it possible for higher education to maintain internationalization. Instead of making students and faculty mobile, which is a standard practice in the IA approach, IaD has facilitated mobility of knowledge. In other words, it has made it possible for students to remain in their country of residence (similar to IaH) and yet receive education from an overseas institution. IaD has taken many different forms so far. In some institutions it has been realized in the form of partnership among universities which makes it possible for students even to be enrolled in an overseas university and take courses and credits from that university. Alternatively, it can take the form of short virtual exchange programs in which students gain international exposure without receiving academic credits for it. COIL bears resemblance to the latter scenario indeed. However, how IaD is realized is more a matter of affordances available to the two (or more) partnering universities. As the two examples given in this article illustrated, COIL provides higher education institutions with an adaptable and flexible approach to internationalization. Depending on the goals and missions of the partnering universities and courses, their COIL can take many different forms. The examples also indicated how COIL and its underlying idea of mobility of knowledge can benefit students as well as institutions particularly in uncertain times such as the current global pandemic we are struggling with. No matter whether the current pandemic will soon be over or not, IaD and its idea of mobility of knowledge, have immense potential for internationalization in higher education. After all, a world replete with "new normals" will entail new approaches to internationalization as well. The present article, however, was a position paper introducing the idea of mobility of knowledge and situating it withing the existing literature on internationalization in higher education. Therefore, it has not been concerned with assessing the effects of COIL and other similar approaches on the realization of internationalization goals. Future data driven research can shed light on this aspect of doing COIL by collecting and analyzing pre- and post- intervention data from COIL programs. Mobility of knowledge and COIL are both relatively recent phenomena, and with the current surge in interest in them it is hoped that future research and scholarship exploring their various aspects will enable educators to make the most of them.

References

Beelen, J., & Jones, E. (2015). Redefining internationalization at home. In A. Curai, L. Matei, R. Pricopie, J. Salmi & P. Scott (Eds.), *The European higher education area: Between critical reflections and future policies* (pp. 67-80). Dordrecht: Springer.

Brooks, R., & Waters, J. (2011). *Student mobilities, migration and the internationalization of higher education*. Basingstoke: Palgrave Macmillan.

Crowther, P., Joris, M., Otten, M., Nilsson, B., Teekens, H., & Wächter, B. (2001). *Internationalisation at home: A position paper*. Amsterdam: EAIE.

De Wit, H. (2010). *Internationalisation of higher education in Europe and its assessment, trends and issues*. The Hague: NVAO.

Hammer, M. (2012). The intercultural development inventory: A new frontier in assessment and development of intercultural competence In M. Vande Berg, R. M. Paige, & K. H. Lou (Eds.), *Student Learning Abroad* (pp.115-136). Sterling, VA: Stylus Publishing.

Harrison, N. (2015). Practice, problems and power in 'internationalisation at home': Critical reflections on recent research evidence. *Teaching in Higher Education, 20*(4), 412–430.

Hauck, M. (2019): Virtual exchange for (critical) digital literacy skills development. *European Journal of Language Policy, 11*(2), 187 210.

Hudzik, J. K. (2011). *Comprehensive Internationalization: From Concept to Action.* Washington, D.C.: NAFSA.

Knight, J. (2004). Internationalization remodeled: Definition, approaches, and rationales. *Journal of Studies in International Education,8*(1), 5–31.

Knight, J. (2006). *Internationalization of higher education: New directions, new challenges*. Paris: IAU.

Lindner, R. & O'Brien, D. (2019): The global virtual teams project: Learning to manage team dynamics in virtual exchange. In A. Turula, M. Kurek, & T. Lewis (Eds.), *Telecollaboration and virtual exchange across disciplines: In service of social inclusion and global citizenship* (pp. 81-89). Voillans: Research Publishing Net.

Mittelmeier, J., Rienties, B., Gunter, A., & Raghuram, P. (2020). Conceptualizing Internationalization at a Distance: A "Third Category" of University Internationalization. *Journal of Studies in International Education*. doi.org/10.1177/1028315320906176

Mittelmeier, J., Rienties, B., Rogaten, J., Gunter, A., & Raghuram, P. (2019). Internationalisation at a Distance and at Home: Academic and social adjustment in a South African distance learning context. *International Journal of Intercultural Relations,72*, 1-12.

O'Dowd, R. (2018): From telecollaboration to virtual exchange: State-of-the-art and the role of UNICollaboration in moving forward. *Journal of Virtual Exchange*, *1*, 1–23.

OECD. (1996). Internationalizing the curriculum in higher education. Paris: OECD press.

Ramanau, R. (2016). Internationalization at a distance: A study of the online management curriculum. *Journal of Management Education, 40*(5), 545–575.

Rubin, J. & Guth, S. (2015). Collaborative online international learning: An emergent format for internationalizing curricula. In A. S. Moore & S. Simon (Eds.), *Globally networked teaching in the humanities theories and practices* (pp. 15-28). New York: Routledge.

Salisbury, M., An, P. & Pascarella, E. (2013). The effect of study abroad on intercultural competence among undergraduate students. *Journal of Student Affairs Research and Practice*, *50*(1), 1–20.

Shiozaki, H. (2016, January 21-22). *Collaborative Online International Learning (COIL) for Critical Reading of Media: Collaboration between IIUM and Kansai University*. Paper presented at the International Language and Tourism Conference, Kuala Lumpur, Malaysia.

Stigger, E. Wang, M. Laurence, D. & Bordilovska, A. (2018). *Internationalization within higher education: Perspectives from Japan*. Tokyo: Springer.

Tait, A. (2018). Open Universities: The next phase. *Asian Association of Open Universities Journal, 13*(1), 13–23.

PERCEIVED MENTORING SUPPORT AND CAREER SATISFACTION: THE ANTECEDENT ROLE OF EMPLOYEE HUMILITY

Sakarin Noypa[1], Kanon Trichandhara[2] and Wisanupong Potipiroon[3]

[1]Faculty of Management Sciences, Prince of Songkla University
[2]Faculty of Management Sciences, Prince of Songkla University
[3]Faculty of Management Sciences, Prince of Songkla University
Sakarin Noypa, sakarin.noy@gmail.com

Abstract

A humility executives' person who has been career success. The present study examines the relationship between humility and career success of life insurance sales agents and the mediating roles of perceived mentoring support from supervisors. The sample of life insurance agents was drawn from of a major life insurance company, which occupies the largest life insurance market share in Thailand. The data was analyzed by the structural equation modeling (SEM) and collected from 395 life insurance sales agents. Survey questionnaire survey were used to collect the data. The results found that humility had direct positive effects on perceived career success of the life insurance sales agents. In addition, these effect was partially mediated by perceived mentoring support from supervisors. These results suggest that it is important for organizations to focus on the selection of individuals who are a good fit to their jobs and also to emphasize the development of leadership and supervisory competencies in promoting career success among their followers.

Key words: Humility Life insurance sales agents Supervisor Perceived career success

Introduction

One of popular career is life insurance sell agents. The information shows Life insurance sell agent is an increasingly popular career choice, especially with the growing sales opportunities as the Thai population ages. Health insurance is also in higher demand from clients. Additionally, more people are concerned with saving for their future. According to The Thai Life Assurance Association (2017a) in 2016, the number of insurance sales agents rose 4% from 49,050 to 51,018 persons. Sales agents remain the principal channel for the sale of life insurance products. In 2017, their total earnings were reported to be 208,074.20 million baht or 47.21% of the total premium income (The Thai Life Assurance Association, 2017b). However, it has also been reported that a significant number of life insurance agents have abandoned their career. In particular, the turnover among life insurance sales agents is very high because of the frequency of encountering failure, rejection, and indifference from prospective clients (Seligman & Schulman, 1986). However, other reasons for sale agents to leave work. It is not always because the lack of selling ability but to accept better opportunities elsewhere, either in life insurance or in other fields (Wallace, Clarke, & Dry, 1956; Janowski, 2018). One crucial issue needed to be considered is if these sales agents are fit to the sales jobs to survive and progress in this business. Related literature in career success in sales reveal importance and relationships between personality traits, perceived mentoring support and career success.

Most of the understanding that the salesperson must have an extraversion or proactive personality. The extraversion personality, one of the Big Five dimensions, is defined as possessing social skills, activity, assertiveness and energy which seem relevant to the career of salesperson (Jackson, 2001). Extraversion was a valid predictor for managers and for sales associates. Interaction with others is a vital part of their job. Individuals who rate high on extraversion would more likely be effective in their job (Barrick & Mount, 2005) and tend to attract people and resources (Fuller & Marler, 2009) investigated personality traits and sales effectiveness of life insurance sales agents in the company with the largest share in the market in years 2011-2014 across Poland. The study found that extraversion predicted job performance by social interaction but that the trait relationship was not correlated to the life insurance agent's sales efficiency (Janowski, 2018). But now found that part research contradicts that extraversion traits If it is too high, it may not affect work performance. Instead, people who are ambiverts to the right amount of people are better able to convince and close a deal. Show that personality traits influence career success (Grant, 2013). Therefore, the researcher proposed that the humility may be important in the work environment in Thailand because it is a socialist nature (collectivistic) and different of power distance (Hofstede, Hofstede, & Minkov, 2010) The humility is essential to competitive advantage Humility helps strategic companies achieve outstanding results as it enhances the company's ability to understand and respond to external threats and opportunities. It also helps team and leaders are avoid problems of self-satisfaction and excessive confidence (Vera, D., & Rodriguez-Lopez, A, 2004).

Literature has also strongly suggests that mentoring plays an important role to the success of a salesperson's career (Hartmann et al., 2013; Miao, Evans, & Li's, 2017), particularly, perceived training and knowledge, both have a strong impact on organizational satisfaction (Hartmann et al., 2013). Some research has investigated the relationship between mentoring and career success, results show that individuals receiving mentoring report a positive effect of mentoring on their career success (Allen, Eby, Poteet, & Lentz, 2004; Bozionelos, 2004). Moreover, it has been found that this relationship is likely to be associated with a good relationship between mentors and employees who share interests, inspiration or career opportunities and this interpersonal relationship creates career value (Noe, 1988). Moreover several studies reveal that the perceived mentoring support enhances career advancement and perceived career opportunities brings about desirable outcomes such as career satisfaction (Eby, Allen, Evans, Ng, & DuBois, 2008), increased salary and promotion (Allen, Eby & Lentz, 2006), better performance and reduction of staff turnover (Hartmann et al., 2013). Some studies into mentoring with the life insurance agents and salespeople show that those who received advice have better results in terms of increased salary, promotion, career opportunities, and career satisfaction. In a study of the effects of mentoring on life insurance sales agents in the northern region of Peninsular Malaysia, managers who provide mentoring and support during training confers positive influence on their mentees in terms of confidence building, thereby improving overall customer service quality (Piaralal, Bhatti, Piaralal, & Juhari, 2016).

Research Objective

The results from literature review also suggest that the relationships between humility to perceived mentoring impact on the career success of insurance sales agents in Thailand. This proposed study investigate the impacts of humility and perceived mentoring support on career success. It is anticipated that an insurance sales agent with humility personality trait who has perceived the mentoring support will be more successful in their sales job because he/she will feel more confident and motivated to improve the quality of their work, and consequently gain greater career satisfaction.

Literature Review

Career Success

In general, sales agents are more likely to define success in terms of the money they earn rather than the intrinsic rewards of the work itself (Melamed, 1995). Most high-performing sales agents, however, tend to feel more successful in their careers and such high performance are extremely important to organizational strategy (Cron, Slocum, & Jr, 1986). So like top performers in other areas, high sales performers expect both objective (financial) and subjective (recognition) outcome in their career rewards because these two encourage the success of both individuals and their firm (Miao, Evans, & Li, 2017). Indeed, objective career success measure may not truly reflect the happiness that a person receives from a career while subjective career success is defined as individuals' feelings of accomplishment and satisfaction with their careers (Judge, Cable, Boudreau, & Bretz Jr, 1995; Arthur, Khapova, &Wilderom, 2005; Shockley, Ureksoy, Rodopman, Poteat& Dullaghan, 2016). Therefore, the subjective career success may be more relevant to measure career success from the perspective of the professionals. This subjective career success measures a person's satisfaction with their own views and how much is the skill of work in the field he/she possesses. However, many of career theories suggest that subjective career success is multifaceted. People change the path of their career to match different aspects of their lives both inside and outside of work (Shockley, et al., 2016). All in all, each person has different levels of satisfaction depending on the characteristics of each individual person (Heslin, 2005). Nevertheless, subjective criteria have increasingly been adopted within career success research over the last decade (Greenhaus, 2003). Accordingly, this current study aims to measure career success using career satisfaction variable.

Humility

Several other research studies also show that humility trait has been reflected in personality of many of the successful people of the past. People with humility personality express the power to drive work, admit mistakes and accept criticism from others and adapt to recommendations to improve. As a result, leaders who have such traits are successful in their work. In addition, humility influences creativity via knowledge sharing (Tuan, 2019). Humility trait in leaders has been found to have a relationship with positive outcomes of followers, teams and organizations with performances (Owens & Hekman, 2016; Zhang, Ou, Tsui, & Wang 2017; Rego & Simpson, 2018). Thus, humility is one of the personality traits that the organization seeks in recruiting their personnel to work (Johnson, Rowatt & Petrini, 2011; Argandona**,** 2015**;** Aziz, 2019**).** Accordingly, the present research has set the first hypothesis for the study as follows.

Hypothesis 1: Humility has a direct effect on career satisfaction of the life insurance sales agents.

Mentoring

Individual personality traits has been found to provide different outcomes in career mentoring (Bozionelos, Bozionelos, Polychroniou, & Kostopoulos, 2014). Development of the relationship between employee and mentor, and the perceptions of an employee on mentoring are found to be influenced by the personality traits of the employee and on the occupational environment. Research by Turban and Dougherty (1994) on workplace and career mentoring indicates that an adaptive personality positively impacts career attainment and perceived career success. Personality traits factors may influence employee's attempts to initiate mentoring relationships and impact on their career success. This information affirms the importance of the mentoring and individual traits on the success of life insurance sale agents across a broad range of situations (Lounsbury, Foster, Levy, & Gibson, 2014). Furthermore, an understanding of the different factors that can predict perceived mentoring in organizations is necessary since it will enable high quality human resource development and support employees in optimizing the relational resources needed to survive in a hypercompetitive work environment (Ghosh, 2014). The need to identify which employee's characteristics are best related to their development with the perceived contribution of the mentoring is essential as it has a great impact on their career success (Goldner, 2016). In this study the researchers investigate into personality trait i.e. humility of the life insurance sales agents to see if it is well matched with their perceived mentoring support and if this relationship can mediate the relationship between humility and career satisfaction.

Hypothesis 2: Perceived mentoring support mediates the relationship between humility and career satisfaction

Transformation Leadership Theory

The researchers draw upon Transformation Leadership Theory as a conceptual framework. The transformational leadership components include certain characteristics as respectful personality, individualized consideration, and intellectual stimulation (Bass, 1985). According to transformational leadership, the leader acts as a coach or an advisor to assist and inspire those followers to be able to perform more than expected, give the opportunity to learn new things and to make the most of their talents and support them to progress in their career. Indeed, transformation leadership theory explains the relationship between perceived mentoring support and career satisfaction. A leader or mentor plays an important role in initiating creativity (Fiedler, 1967; Bennis & Nanus, 1985; Robbins, 1988), therefore they must be influential and recognized so that they can influence and motivate others (mentees) to act as they want to achieve their goals. This research brings in transformational leadership in describing the relationship between life insurance agents and the perceived mentoring support leading to career satisfaction.

Methodology

Sample and Data Collection

The sample group used in the study was life insurance agents in Thailand covering all seven regions of the country, comprising Bangkok and its vicinities, North, Central, East, West, Northeast, and South. Theoretically, a good sample size for the structural equation analysis (SEM): should be no less than 200 samples and that was determined by the criteria of the ratio of the observable to the sample ratio (Observed variable to sample ratio). The number of data sizes collected should be 10-20 times the observed variable (Hair, 2010). Therefore, the researcher chose 10 times the number of sample size criteria of the observable variable. The conceptual framework for this full research had 29 observable variables, resulting in the number of 290 samples (29 variables × 10 samples), which was within the minimum sampling criteria. The researchers conducted the multistage sampling. First, the cluster random sampling was applied; sampling from the 7 geographical regions of Thailand, and the simple random sampling was performed in the second step. The research tool used in the present quantitative research was a closed-ended questionnaire which is divided into two main parts: general information of the respondents and factors that affect their career success.

To collect the data, an online questionnaire was sent through the Life Insurance Agent Line Group of the prospective 7 regions including Bangkok and its vicinity with a total of (330), North (220), Central (85), East (110), West (95), Northeast (100), and South (160); all at a total of 1,100.

Data collection took two steps at a total of 60 days. The first 30 day period was from September.5 to October. 4, 2019; 276 responses were returned and this number was not sufficient for the data analysis. Subsequently, during the second 30 day period, from October 5 to November 6, 2019, the number of 119 responses was returned making a total of 395, representing 35% response rate. The personal data of respondents are described in Table 1. Results of the demographic data of the respondents showed that more than half of the respondents were female (66%). The majority of the respondents' age ranged from 36 to 45 years (40%). Most are working as a general sales agent (66%); 77%. earned a bachelor's degree; the majority of the respondents worked in the southern region (39%); and most of the respondents' work experience was between 1-9 years (58%).

Table 1: The Demographics of respondents

Information		Number	Percentage
Sex	male	136	34
	female	259	66
Age (year)	Lower than 26	15	4
	26 - 30	41	10
	31 - 35	51	13
	36 - 45	159	40
	46 - 55	82	21
	Over 55	47	12
Levels of sale rep.	general	262	66
	from the boss level up	133	34
Education	lower than bachelor's degree	12	3
Education	bachelor's degree	306	77
	Master’s	74	19
	Ph. D.	3	1
Regions working in	Bangkok and its vicinity	14	3
	North	126	32
	North-East	26	7
	Central	22	5
	South	154	39
	East	46	12
	West	7	2
Work experience (years)	Lower than 1	18	5
	1-9	229	58
	10-18	103	26
	19-27	33	8
	28-37	12	3
Total		***N* = 395**	**100**

Measuring Instrument

All the 25 items from tree factors used in the survey questionnaire were adapted and developed by the researchers based on an extensive literature review.

Career satisfaction (5 items) measuring were adapted from Greenhaus, Parasuraman and Wormley (1990). These items were based on a five-point scale ranging from 1= strongly disagree to 5 = strongly agree (α = .92).

Humility (9 items) measuring the respondents' personality trait of humility were adapted from Owens, Johnson and Mitchell (2013). These items were based on a five-point scale *ranging from 1 = strongly disagree to 5 = strongly agree (α = .85).*

Perceived mentoring support (11 items) measuring the respondents' perceptions of mentor role with mentor scale were adapted from Ragins and Cotton (1999). These items were based on a seven-point scale ranging from 1=strongly disagree to 7 = strongly agree (α = .98).

Data Analysis

The study hypotheses were tested using the structural equation modeling (SEM) in Mplus Version 7.2 (Muthén & Muthén, 1998-2012). Data analysis is conducted in a two-step procedure recommended by Anderson and Gerbing (1988). First, the validity and reliability of the study variables were examined via confirmatory factor analyses (CFAs). Second, the hypotheses were examined via a structural equation model. Several indices were used to assess the model fits, including the overall model's chi-square, the comparative fit index (CFI), the Tucker-Lewis Index (TLI), and the root mean square error of approximation (RMSEA). Criteria used to indicate a good fit are CFI and TLI should be above 0.90 (Hu & Bentler, 1999); and RMSEA should be between 0.05 and 0.08 (MacCallum, Browne, & Sugawara, 1996).

Results

The factor loadings are required to be above the recommended .40 value (Brown, 2006). Since the factor loading of item 2 in HM (This person admits it when he/she does not know how to do something). was at 0.25 which is lower than the criteria set, it was then deleted The accepted items with the factor loadings of the constructs above 0.40 at the factor loadings ranging from 0.46 to 0.96. Furthermore, the average variance extracted (AVEs) were found ranging from 0.51 to 0.81, which exceeded the recommended value of 0.50 (Fornell & Larcker, 1981). Composite reliabilities (CR) ranging from 0.89 to 0.97, also exceeded the recommended value of 0.60 (Bagozzi & Yi, 1988). As shown in Table 2, the adjusted measurement model (the Humility 2 item was deleted) was examined again. The results showed that this model had a good fit to the data (χ^2 = 2845.823, *df*= 975, p < .001; CFI = .92; TLI = .92; RMSEA = .07). The proposed adjusted measurement model was thus accepted as the best fitting model.

Table 2: Comparisons of Measurement Models

Model	X^2	df	P-value	RMSEA	CFI	TLI
Original	2947.927	1020	0.000	0.069	0.92	0.92
Adjusted	2845.823	975	0.000	0.070	0.92	0.92

Note. N = 395

As shown in Table 3, Results of the Pearson correlation coefficient between the variable pairs were found in the same direction, i.e. all the observed variables had a positive correlation with a correlation coefficient between 0.108-0.927 at a statistically significant level.

Table 3: Means, Standard Deviations, and Correlations

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13
Humility	(0.856)												
Sponsorship	.250**	(0.958)											
Coaching	.280**	.927**	(0.950)										
Protection	.223**	.843**	.869**	(0.959)									
Challenging	.259**	.833**	.881**	.862**	(0.961)								
Exposure	.228**	.835**	.853**	.886**	.907**	(0.965)							
Friendship	.214**	.839**	.859**	.877**	.865**	.888**	(0.963)						
Socialization	.178**	.671**	.672**	.684**	.647**	.698**	.735**	(0.904)					
Parenting	.186**	.696**	.692**	.711**	.705**	.722**	.767**	.729**	(0.957)				
Role Model	.187**	.777**	.814**	.793**	.814**	.807**	.853**	.660**	.783**	(0.972)			
Counseling	.208**	.832**	.871**	.834**	.872**	.862**	.883**	.675**	.767**	.922**	(0.983)		
Acceptance	.212**	.720**	.745**	.726**	.759**	.790**	.807**	.682**	.683**	.769**	.788**	(0.962)	
Career Satisfaction	.279**	.344**	.342**	.266**	.291**	.306**	.241**	.251**	.211**	.264**	.267**	.317**	(0.921)
M	4.04	3.87	3.74	3.55	4.38	5.16	5.15	5.09	5.31	5.21	5.35	4.54	4.61
S.D.	0.704	0.702	0.635	1.005	0.492	1.663	1.624	1.727	1.632	1.683	1.75	1.792	2.025

Note: ** $p < 0.01$

As a strong support was found for the validity and reliability of the measuring instruments, the structural model was then examined. Standardized parameter estimated and explained variance (R^2) in all the analyses that follow are displayed in Table 4. As shown in Figure 1, the results of direct effects showed that humility was positively related to perceived mentoring support (β = 0.282, p< .001).This could explain about 8% of the variance in perceived mentoring support.

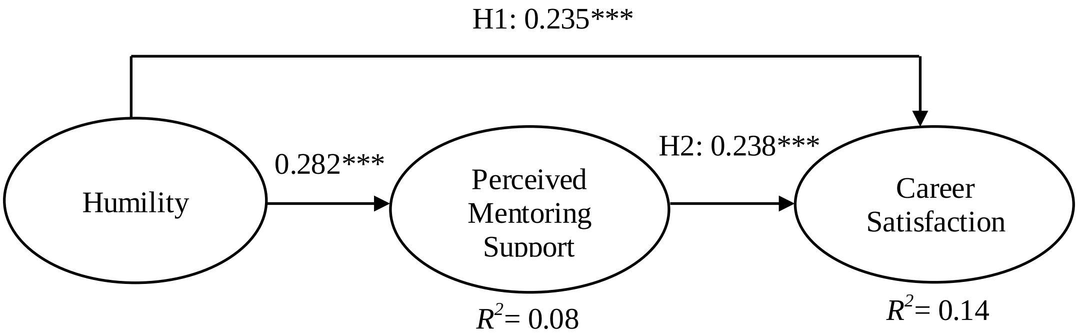


Figure 1: The Structural Equation Modeling Results
Note: ***p<.001

Results showed that the perceived mentoring support was positively related to career satisfaction (β = 0.238, p < 0.001) and humility was positively related to career satisfaction (β = 0.235, p < 0.001). Together, these variables explained about 14.3% of the variance in career satisfaction. These findings provide support for Hypothesis 1. Furthermore, these results showed that there was indirect effect of humility via perceived mentoring support on career satisfaction (0.067; *SE* = 0.021; 90% CIs [0.037, 0.108]). These results of analysis provide full support to Hypothesis 2, as shown in Table 4.

Table 4: The Structural Equation Modeling Analyses

Estimated Paths	Effect	S.E.	95% CIs	
			Lower	Upper
Humility --> Career Satisfaction	0.235***	0.060		
Humility --> MEN --> Career Satisfaction	0.067**	0.021	0.037	0.108
Explained Variance (R^2)				
Perceived Mentoring Support	0.080**	0.032		
Career Satisfaction	0.143**	0.040		

Note: MEN = Perceived Mentoring Support, *CIs* that excludes zero indicates that the conditional indirect effects are significant; * = significant indirect paths [95% CI] **p<.01, ***p<.001

Conclusion and Discussion

The present research aims to study the relationship between humility on career satisfaction by investigating the sequential mediating role of perceived mentoring support among life insurance agents in Thailand. The results show that humility has a positive and direct influence on career satisfaction; and perceived mentoring support played an important mediating role in influencing career satisfaction. This first finding is inconsistent with previous studies describing humility as a personality that expresses acceptance of one's own abilities, self-confidence, as well as acceptance of the talents of others (Owens, 2013)-but not depriving oneself-, being generous, and being focused on others (Morris & Urbanski, 2005). Therefore, people with such personality are self-adapting, positive in work attitudes, organizational bond, and satisfied in their job (Vera & Rodriguez-Lopez, 2004). Humility has also been found to create a positive impact on colleagues (Chiu, Owens & Tesluk, 2016) and therefore enable productivity, satisfaction, and career success (Nielsen & Marrone, 2018). In this research study, the researchers see humility as a personality that corresponds to the job of insurance sales agents in that it helps individuals learn and develop themselves, as well as accept the talents of others, and therefore, enable working well with others. In the same regards, the quality of efficiency, as well as acceptance of other people's opinions convince customers to have a better impression on life insurance agents. The researchers, however, would recommend that future research studies may investigate into other personality traits or those opposite to humility to compare career satisfaction levels in order to extend the knowledge and apply research results to career selection.

The second finding that perceptions of counseling advices or activities, which are the mediating variant between humility and career success shows that humility makes individuals open to learning and listening to the opinions of others. Being overseen by a supervisor who provides counseling has been found to result in individual career satisfaction. Past research suggests that mentors can also influence mentees' performance via their psychosocial support by suggesting ways to work and can provide career support from their experience and expertise for career development and positive results. (Kram, 1983; Ragins & Mcfarlin, 1990) and this contributes to the driving of career satisfaction (Kram, 1985; Kram & Isabella, 1985; Scandura & Ragins, 1993).These finding are in consistent with previous studies showing that employees supervised by a mentor are provided with the opportunity to be successful in their careers (Allen, Eby, Poteet, & Lentz, 2004; Bozionelos, 2004); and career success stems from the relationship between the mentor and employees. Employees when shared with the mentor's work experience and inspired or given opportunities to work they are more likely to earn career satisfaction and as a result the success, so the role of mentoring is vital to career success (Noe, 1988; Eby, Allen, Evans, Ng & DuBois, 2008). It is; therefore, suggested that the organization should give priority to supervisors in allowing them to develop higher potentials and leadership so that this capacity will consequently affect the responsiveness of the followers leading to their career success (Bass, 1985).

References

Allen, T. D., Eby, L. T., Poteet, M. L., & Lentz, E. (2004). Career Benefits Associated With Mentoring for Proteges : A Meta-Analysis. *Journal of Applied Psychology, 89*(1), 127–136. https: //doi.org/10.1037/0021-9010.89.1.127

Argandona, A. (2015). Humility in management. *Journal of Business Ethics,132*(1), 63-71.

Arthur, M. B., Khapova, S. N., &Wilderom, C. P. (2005). Career success in a boundaryless career world. Journal of Organizational Behavior: *The International Journal of Industrial, Occupational and Organizational Psychology and Behavior, 26*(2), 177-202.

Association, T. T. life assurance. (2017a). ภาพรวมและแนวโน้มธุรกิจประกันชีวิต 2560. *Journal of The Thai Life Assurance Association*, *153*(36), 1–32.

Association, T. T. life assurance. (2017b). วารสารประกันชีวิต. *Journal of The Thai Life Assurance Association*, *156 October* (37), 1–32.

Aziz, K. (2019). Why is humility so relevant for leaders and can it be developed through?. *Strategic HR Review, 18*(1), 30-33.

Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science, 16*(1), 74-94.

Barrick, M. R., Parks, L., & Mount, M. K. (2005). Self-monitoring as a moderator of the relationships between personality traits and performance. *Personnel Psychology*, *58*(3), 745-767.

Bass, B. M. (1985). *Leadership and performance beyond expectations*. New York London: Free Press

Bennis, W., and Nanus, B. (1985). *Leaders : The Strategies for Taking Change*. New York : Harper and Row.

Bozionelos, N. (2004). Mentoring provided: Relation to mentor's career sucess, personality, mentoring received. *Journal of Vocational Behavior, 64*(1), 24–46.

Bozionelos, N., Bozionelos, G., Polychroniou, P., & Kostopoulos, K. (2014). Mentoring receipt and personality: Evidence for non-linear relationships. *Journal of Business Research*, *67*(1), 171–181. https://doi.org/10.1016/j.jbusres.2012.10.007

Brown, T. A. (2006). Confirmatory factor analysis for applied research. *The Guilford Press*. New York.

Chiu, C. Y. C., Owens, B. P., & Tesluk, P. E. (2016). Initiating and utilizing shared leadership in teams: The role of leader humility, team proactive personality, and team performance capability. *Journal of Applied Psychology*, *101*(12), 1-16.

Cron, L. W., Slocum, W. J., & Jr. (1986). The influence of career stages on salespeople's job attitudes, work perceptions, and performance. *Journal of Marketing Research*, *23*(2), 119–129.

Eby, L. T., Allen, T. D., Evans, S. C., Ng, T., & DuBois, D. L. (2008). Does mentoring matter? A multidisciplinary meta-analysis comparing mentored and non-mentored individuals. *Journal of vocational behavior, 72*(2), 254-267.

Fiedler, Fred E. (1967). *Theory of Leadership Effectiveness*. New York: McGraw-Hill.

Fornell, C., & Larcker, D. F. (1981). Structural Equation Models with Unobservable Variables and Measurement Error: Algebra and Statistics. *Journal of Marketing Research, 18*(3), 382-388. doi:10.2307/3150980

Fuller Jr., B. F., & Marler, L. E. (2009). Change driven by nature: A meta-analytic review of the proactive personality literature. *Journal of Vocational Behavior, 75*(1), 329–345. https://doi.org/10.1016/j.jvb.2009.05.008

Ghosh, R. (2014). Antecedents of mentoring support : a meta-analysis of individual , relational, and structural or organizational factors. *Journal of Vocational Behavior*, *84*(1), 367–384. https://doi.org/10.1016/j.jvb.2014.02.009

Grant, A. M. (2013). Rethinking the extraverted sales ideal: The ambivert advantage. *Psychological Science, 24*(6), 1024-1030.

Greenhaus, J. H. (2003). Career dynamics. *Handbook of psychology*, 519-540.

Greenhaus, J. H., Parasuraman, S., & Wormley, W. M. (1990). Effects of race on organizational experience, job performance evaluations, and career outcomes. *Academy of Management Journal, 33*(1), 64–86.

Grima, F., Paillé, P., Mejia, J. H., & Prud'homme, L. (2014). Exploring the benefits of mentoring activities for the mentor. *Career Development International, 19*(4), 469–490.

Guest, D. E. (1997). Human resource management and performance: a review and research agenda. *International Journal of Human Resource Management*, *8*(3), 263-276.

Hair, J. F., Anderson, R. E., Babin, B. J., & Black, W. C. (2010). *Multivariate Data Analysis: A global perspective (Vol. 7)*.

Hartmann, N. N., Rutherford, B. N., Hamwi, G. A., & Friend, S. B. (2013). The effects of mentoring on salesperson commitment. *Journal of Business Research, 66*(1), 2294–2300.

Heslin, P. A. (2005).Conceptualizing and evaluating career success.*Journal of Organizational Behavior, 26*(2), 113-136.

Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). *Culture and organisations: Software of the mind* (3rd ed.). New York: McGraw-Hill

Hu, L. t., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*(1), 1-55. doi: 10.1080/10705519909540118

Jackson, C. J. (2001). Comparison between Eysenck's and Gray's models of personality in the prediction of motivational work criteria. *Personality and Individual Differences, 31*(1), 129–144. https://doi.org/10.1016/S0191-8869(00)00124-0

Janowski, A. (2018). Personality traits and sales effectiveness: The life insurance market in poland. *Journal of Entrepreneurship, 14*(1), 143-160.

Johnson, M. K., Rowatt, W. C., & Petrini, L. (2011). A new trait on the market: Honesty–Humility as a unique predictor of job performance ratings. *Personality and Individual differences, 50*(6), 857-862.

Judge, T. A., Cable, D. M., Boudreau, J. W., & Bretz Jr, R. D. (1995). An empirical investigation of the predictors of executive career success. *Personnel psychology, 48*(3), 485-519.

Kram, K. E. (1983). Phases of the mentor relationship. *Academy of Managementjournal, 26*(4), 608-625.

Kram, K. E. (1985). *Mentoring at work. Glenview.* Scott, Foresman and Co.

Kram, K. E., & Isabella, L. A. (1985). Mentoring Alternatives: The Role Of Peer Relationships In Career Development. *Acadamy of Management Journal*, *28*(1), 110–132.

Lounsbury, J. W., Foster, N. A., Levy, J. J., & Gibson, L. W. (2014). Key personality traits of sales managers. *Work*, *48*(1), 239–253. https://doi.org/10.3233/WOR-131615

McClelland, D. C. (1965).N achievement and entrepreneurship: A longitudinal study. *Journal of personality and Social Psychology*, *1*(4), 389.

Melamed, T. (1995). Career Success: The Moderating Effect of Gender. *Journal of Vocational Behavior*, *47*, 35-60.

Miao, C. F., Evans, R. K., & Li, P. (2017). Effects of top-performer rewards on fellow salespeople : a double-edged sword. *Journal of Personal Selling & Sales Management*, *37*(4), 280–297.

Morris, J. A., Brotheridge, C. M., & Urbanski, J. C. (2005). Bringing humility to leadership: Antecedents and consequences of leader humility. *Humanrelations*, *58*(10), 1323-1350.

Muthén, L., & Muthén, B. (1998-2012). *Mplus user's guide*. Los Angeles, CA: Authors.

Nielsen, R., &Marrone, J. A. (2018). Humility: Our current understanding of the construct and its role in organizations. *International Journal of Management Reviews*, *20*(4), 805-824.

Noe, R. A. (1988). An InvestigationOf The Determinants Of Successful Assigned Mentoring Relationships. *Personnel Psychology*, *41*(1), 457–479.

Owens, B. P., &Hekman, D. R.(2016).How does leader humility influence team performance? Exploring the mechanisms of contagion and collective promotion focus. *Academy of Management Journal, 59*(3), 1088-1111.

Owens, B. P., Johnson, M. D., & Mitchell, T. R. (2013). Expressed humility in organizations: Implications for performance, teams, and leadership. *Organization Science, 24*(5), 1517–1538.

Piaralal, S. K., Bhatti, M. A., Piaralal, N. K., & Juhari, A. S. (2016). Factors affecting service recovery performance and customer service employees A study of Malaysian life insurance industry. *International Journal of Productivity and Performance Management*, *65*(7), 898–924. https://doi.org/10.1108/IJPPM-04-2014-0060

Ragins, B. R., & Cotton, J. L. (1999). Mentor functions and outcomes: A comparison of men and women in formal and informal mentoring relationships. *Journal of applied psychology*, *84*(4), 529.

Ragins, B. R., & Mcfarlin, D. B.(1990).Perceptions of mentor roles in cross-gender mentoring relationships. *Journal of vocational behavior, 37*, 321-339.

Rego, A., & Simpson, A. V. (2018). The perceived impact of leaders' humility on team effectiveness: an empirical study. *Journal of Business Ethics, 148*(1), 205-218.

Robbins, Stephen P. (1988). *Management : Concepts and Applications*. 2nd ed. Englewood Cliffs, New Jersey : Prentice-Hall.

Scandura, T. A., & Ragins, B. R. (1993). The effects of sex and gender role orientation on mentorship in male-dominated occupations. *Journal of vocationalbehavior*, *43*(3), 251-265.

Seligman, M. E. P., & Schulman, P. (1986). Explanatory style as a predictor of productivity and quitting among life insurance sales agents. *Journal of Personality and Social Psychology*, *50*(4), 832–838. https://doi.org/10.1037/0022-3514.50.4.832

Shockley, K. M., Ureksoy, H., Rodopman, O. B., Poteat, L. F., & Dullaghan, T. R. (2016). Development of a new scale to measure subjective career success: A mixed-methods study. *Journal of Organizational Behavior*, *37*(1), 128-153.

Tuan, L. T. (2019). Coach humility and player creativity: The roles of knowledge sharing and group diversity. *Sport Management Review*, 23(2), 284-301.

Turban, D. B., & Dougherty, T. W. (1994). Role of protégé personality in receipt of mentoring and career success. *Academy of Management journal*, *37*(3), 688-702.

Vera, D., & Rodriguez-Lopez, A. (2004). Strategic virtues: humility as a source of competitive advantage. *Organizational dynamics, 33*(4), 393-408.

Wallace, S. R., Clarke, W., & Dry, R. J. (1956). The activity vector analysis as a selector of life insurance salesmen. *Personnel Psychology*, *9*(3), 337–345. https://doi.org/10.1111/j.1744-6570.1956.tb01072.x

Zhang, H., Ou, A. Y., Tsui, A. S., & Wang, H. (2017). CEO humility, narcissism and firm innovation: A paradox perspective on CEO traits. *The Leadership Quarterly*, *28*(5), 585-604.

THE APPLICATION OF BLOCKCHAIN TECHNOLOGY IN OPEN EDUCATION IN THE INTERNET ERA
区块链技术在互联网时代开放教育的应用研究

Guihua Han[1], Mingyu Lin[2], Jianping Ju[3]

[1,2,3] Artificial Intelligence Hubei Business College
[*]**Corresponding author:** Han Guihua ,**E-mail:** hgh415@126.com

摘要

在互联网时代，在线学习日益被广大学习者所接受。这种开放式教育在为学习者带来便利的同时，其在数据上引发的信任危机也急需解决。数据在开放教育中起着至关重要作用，她贯穿于开放式教育始末。而区块链技术的去中心化、去信任化、防篡改特点可应用于开放教育。可创建开放教育新的学费支付方式、新的校企合作模式，明确资源的权属问题等。

关键字：区块链，开放教育，信任危机，确权

Abstract

In the Internet era, online learning is a kind of open education, which is increasingly accepted by the majority of learners, which not only brings convenience for learners, but also leads to a crisis of trust in data. The essence of block chain technology is a distributed database based on consensus model, which solves the trust crisis of online education, brings opportunities and challenges to open education, and then promotes the development of open education. This paper studies the decentralization, trust and tamper-proof characteristics of block chain technology in open education from the aspects of the new payment method of tuition fees, the verification of learning data and the definition of the ownership of resources.

Keywords: block chain, open education, crisis of trust, confirmation of power

I. INTRODUCTION

Driven by the development of big data, artificial intelligence, block chain and other technologies, the way of education are taking place profound changes, innovate the format of educational services, and establish a mechanism for the co-construction and sharing of digital educational resources and further improve the benefit distribution mechanism, intellectual property protection system and a new type of educational service supervision system. At the end of 2016, The State Council issued the "13th Five-Year Plan for National Informatization", which clearly pointed out that the basic research and development and cutting-edge layout of block chain and other technologies should be strengthened, formally affirming the technological and social value of block chain from the perspective of national science and technology strategy. In recent years, more block chain+ has been applied to education reform[1].

II. THE CHARACTERISTICS OF BLOCK CHAIN TECHNOLOGY

Block chain refers to a technical solution to maintain a database in a decentralized and de-trust way. In essence, it is a distributed database based on a consensus mode[2]. This technology platform is presented in a network structure with de-centralization, removing intermediate links and recording data and contracts along the timeline. All confirmed and proven transactions are linked from the beginning of the chain to the latest block, with reading and writing functions that cannot be modified or deleted, which makes the system secure and efficient.

If you need to add a new database to the shared database, you need to get a certain number of approval nodes of the running block chain software in order to reach a consensus. The new database will be upgraded to a trading block that is linked to the system's original block via a password. In short, the block chain is the equivalent of a web log of all the bits that have happened about an open ledger of currency transactions. The ledger keeps getting longer because "absenteeism" keeps creating new blocks to keep track of the latest transactions. The block chain is considered to be the most important technological innovation of Bitcoin, and it is the untrusted proof mechanism for all transactions on the Internet.

III. THE CHARACTERISTICS OF EDUCATION IN THE INTERNET ERA

In the current Internet information age with knowledge economy as the core of competition, China is undergoing an unprecedented great change in the field of education, including the further deepening and application of educational concepts and advanced educational technologies. But the traditional education is still dominant. Traditional education relies on certain behavioral constraints, and relatively undiversified educational institutions provide teaching services for the determined learners at a fixed time and place. This education mode has cultivated a large number of talents for the country in a long period of time. However, due to the limitation of time and space, the excellent educational resources cannot be replicated and spread on a large scale, thus resulting in the imbalance of education between regions.

Online education makes up for the deficiency of traditional education, and changes the traditional education mode. The important characteristic of online education is open and scale, which are mainly reflected in: first, the teaching content more tolerant, the interest classmore prominent , learners can not only learn all the knowledge from preschool education, basic education to higher education through Internet platform, but also can follow their own interests to learn all sorts of relevant knowledge; Second, there are many types and large scale of learners, not only students in school, but also workers and farmers who use their spare time... ; Third, the educational process needs ratification from family, school and society[3].

Compared with the traditional teaching mode, online teaching has the following advantages: first, the teaching object scale is large. In traditional offline teaching, the size of the classroom is usually dozens, and the public courses are usually around 200 or 300, while for online teaching, the teaching objects are as few as dozens, some hundreds or some thousands. Second, the location is not fixed, the traditional teaching is in a fixed classroom, while the online teaching objects can be completed in their own homes, without the fence limitation. Third, the teaching channels are diversified. Traditional teaching has fixed teacher teaching for a course, while online teaching can choose multiple Internet platforms for learning, and the learning process is not limited by a single teacher. Fourth, the learning time is more flexible. Traditional teaching is completed within a fixed period of time, while online teaching can learn through fragmentation and repeatedly learn the content that you do not understand.

IV. OPEN EDUCATION IN THE INTERNET ERA

The emergence of the Internet has changed the production and life style of human society. Nowadays, Internet technology has completely changed people's daily life from changing people's communication style to changing consumption habits.

A. technological revolution

In the development history of human civilization, there have been three technological revolutions, which have promoted the development and progress of human society. The first technological revolution was the invention and use of the steam engine, which drove the textile machine, the pump and so on, causing the rapid development of textile, printing and dyeing, metallurgy and other industries.

The second industrial technological revolution was marked by the invention and application of electric power, which led to profound changes in industrial structure and the rise of electric power, electronics, chemistry, automobile and other industries, which greatly promoted the development of social productive forces and brought great progress to human society[4]. The third technological revolution is the information technology revolution. The Internet was born out of this revolution. Since the 1930s and 1940s, a number of new technologies have emerged, such as atomic energy technology, space technology, electronic computer technology, laser technology and so on, which are worthy of the name of science and technology. The development of these technologies has led to the emergence of new "knowledge industry" sectors, causing the new change of industrial structure.

In the Internet era, people's work and life, learning and entertainment are inseparable from the network platform, the users in the process of using the Internet platform are imperceptibly collected data, and these data are analyzed and sorted out, and then used in the design of the platform, so repeatedly, the use of data forms a closed loop, it is as shown in Fig. 1:

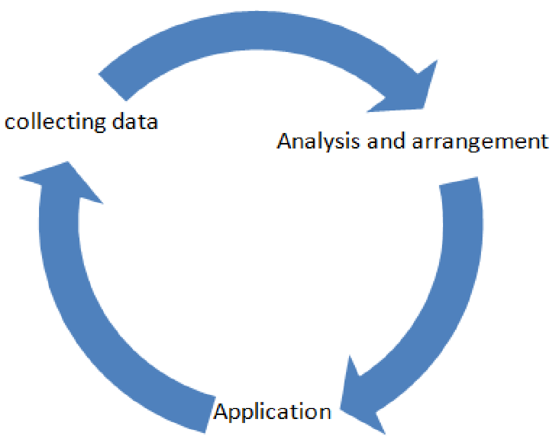


Fig.1 Datausingprocess

Therefore, in the Internet era, mankind has entered a data-driven era of new technology revolution, and data drives the development of the whole society. A large number of data are generated, collected, processed and generated, and then the results are applied to various industries[5]. Data sources can be Internet and online financial data, social platform data, sensor data, enterprise management data and so on. Data is an important asset of Internet enterprises, which promotes the product progress of Internet enterprises.

B. Open Education in the Internet era

There are obvious differences between open education and traditional education in educational object, educational idea, teaching method, learning environment and so on. Open education is a kind of teaching mode which is supported by modern information technology and gets rid of the limitation of time and space. With open, flexible, inclusive, life-long, high-quality as the core concept, a variety of school-running modes coexist in the form of education[6].

In the traditional sense, open education is an education type with relatively flexible admission qualification and learning form. The development of information technology has created a development education mode with the Internet as the carrier. Compared with the traditional open education, the new open education in the Internet era can provide learners with more convenience in time and space[7]. And it can provide personalized and adaptive learning approaches for learners based on the Internet education platform. Specifically, the Internet education platform can collect and analyze the learning behavior data of learners, and further guide and improve the teaching practice based on the analysis results. In this closed loop of data use, open education in the Internet era can transcend traditional forms and achieve more intelligent and efficient adaptive learning[8].

In fact, the education formin the Internet era has been in an evolving state. Open education in the context of the Internet originates from the opening and sharing of educational resources. Then, with the development of the Internet, learners have deep interactions with the Internet in the learning process, and their learning behaviors are recorded and analyzed on the Internet, so that the personalized learning support services can be realized. With the further popularization and development of the Internet, the integration of learners' learning and the Internet continue to deepen, realizing cross-platform interactive learning.

The initial resource sharing was free, with PPT, quiz bank, test tools and other materials freely available to the public through the Internet. With the promotion of the national Education Ministry's first-class curriculum "Shuanwan Plan" and the emergence of various teaching websites, a large number of university teachers have been engaged in the Internet-based teaching reform, and a large number of online open and shared resources based on MOOC or SPOC have been put online. In addition, some teachers have also made their course resources public in their blogs. High-quality teaching resources are valuable, so in addition to free sharing, the paid sharing is also an important way to spread educational resources. Due to the characteristics of electronic educational resources, such as easy reproduction, large quantity and wide distribution, it is necessary to align the technology of rights confirmation and payment in the process of its dissemination[9].

Open education needs to the record learners' learning behaviors on the Internet platform, which usually adopts the centralized structure of "many-to-one". In this framework, learners must maintain absolute trust in the platform and use the evaluation and personalized learning functions provided by the platform. However, due to the "openness", there is a lack of binding force between the educational service providers and learners, which will cause trust crisis among them. Higher level open education needs to realize reliable data sharing and transfer among different Internet education platforms, and need to ensure that the original data used for learning assessment and personalized learning are true and effective[10]. The lack of trust mechanism seriously restricts the further development of open education based on Internet platform. The construction of trust mechanism should run through the whole process of data generation, circulation and dissemination. Using block chain as the infrastructure to manage data can build an open and trustworthy education ecology, thus effectively promoting the development of open education.

V. THE APPLICATION OF BLOCK CHAIN TECHNOLOGY IN OPEN EDUCATION

Block chain technology is currently widely used in the financial industry, human resources industry, insurance industry, healthcare industry, energy industry and so on. In fact, the decentralized, de-trust and data immutable nature of block chain also applies to the education industry. Block chain system can be divided into public chain, private chain and alliance chain. Each node in the public chain has no limit when accessing the network, while the nodes in the private chain and the alliance chain are restricted or need to be audited before joining the network.

A. Innovate the tuition feespayment method

At present, many students pay their tuition fees through bank card withholding payment, and the payment process needs to be realized through the bank. Block chain technology enables direct point-to-point transactions, without the need for third-party platforms, and avoids the disclosure of the personal information. When students pay tuition fees to the school, the transaction is built into a block on the network, and broadcasted to all the network participants[11]. When all the participants verify the validity of the payment, the block is connected to the block chain to complete the transaction. See Fig. 2.

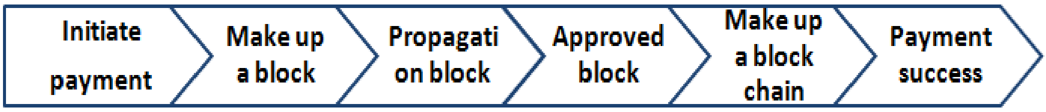


Fig.2 Payment flow with block chain technology

B. Clear verification of learning data

Block chain is characterized by decentralization, tamper-proof, de-trust, and privacy protection and so on, as shown in Fig 3. Block chain technology can record students' personal information, learning process, learning time and store students' academic performance according to its own distributed technology. Meanwhile, through the ledger distributed function, students can find the knowledge content in the corresponding link. Through the learning effect in a certain period of time, teachers can effectively target teaching according to the learning situation of students. Then, teachers can check and accept students' learning effects more accurately according to the established teaching objectives, so as to make the teaching evaluation more real and reliable. Block chain technology allows cross-platform and cross-system operation, which can effectively record students' learning behavior, learning status, learning habits, and learning results. Block chain technology saves the learner dynamic time of searching for students. It does not need to create core storage rules, but only realizes the access and verification of data content through records. On the other hand, with the help of block chain technology, students can master their learning status in the first time and communicate with teachers in a timely manner to ensure their learning effect.

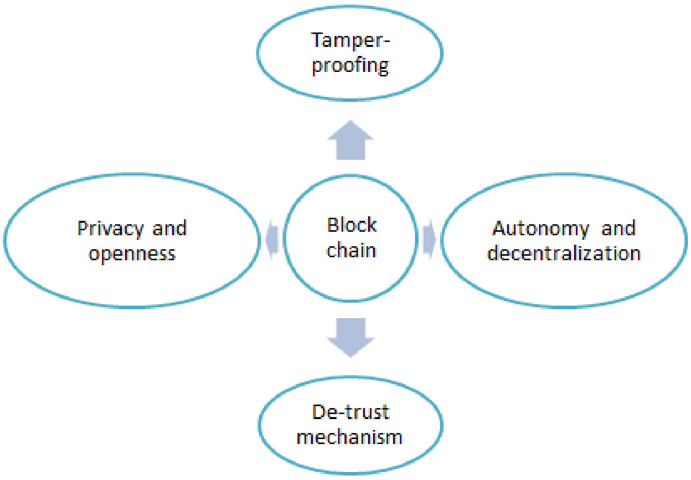


Fig. 3 Features of block chain

C. Clear ownership.

Block chain packages the relevant information and generate blocks in chronological order, making it traceable and verifiable. After the new block is fully added to the main chain, it cannot be changed or deleted and will be permanently stored. The capitalization result of open educational resources should be linked up, and the ownership, use right and usufruct of educational resources should be made clear. In this way, even if the educational resources are maliciously used and modified by third-party platforms, the resource creators can prove the resources ownership through the block chain network, which can eliminate property rights disputes, so as to ensure the healthy development of open educational resources capitalization. Block chain technology is open, transparent and difficult to tamper with, which is used in the registration and confirmation of intellectual property rights of educational resources, which makes the process of confirming rights transparent and fair[12]. in addition, it can also regulate the transaction and use of educational resources through intelligent contracts, in order to ensure the interests of the original creators.

D. Realize the cooperation between schools and enterprises.

The data from Max shows that there is a supply imbalance in some positions in China, which is caused by the information asymmetry. Colleges and universities can store the basic information of students and the learning achievement data of each stage in the education system database, and share the resources with employers, so that employers can make preliminary intentions with students through real data. Students seeking jobs in colleges and universities can also use the block chain distributed ledger function to show their talents to their employers, thus building a new school-enterprise cooperation model.

VI. SUMMARY AND PROSPECT

While open education bring so much convenient for teaching and learning at the same time, it also causes a trust crisis due to the lack of administrative constraints and its data increasing problems. Block chain, as a technology with the characteristics of decentralization and de-trust, is widely used in the field of education. The application of block chain technology to the educational system can combine credits or learning achievements from different educational platforms, can ensure the authenticity of learners' learning behavior, and then apply for the certification of educational institutions that recognize the teaching model, which can ensure the authenticity of academic skills information and realize the safe sharing of educational resources[13]. The rise of block chain technology in the world is relatively short, and the research on block chain technology in China started later than that in other countries. At present, the application of block chain technology in the field of education is still short. There are many challenges such as insufficient storage space in the application of block chain technology in open education, which need to be studied carefully to actively deal with the opportunities and challenges that block chain technology brings to open education, so as to promote the development of open education.

ACKNOWLEDGMENT

This work was financially supported by Research and practice on the training mode of intelligent information technology talents in private universities for engineering education certification (201902188043).

REFERENCES

[1] Wang Menghao, Cao Lei. Research on the capitalization of Open Education Resources based on Block chain Technology[J]. Modern Educational Technology. 2020 (7): 13-19:

[2] Zhang Zhao, Jin Jingqing. Reconstruct the open education in the Internet era based on block chain technology [J]. Modern Distance Education Research.2020 32 (1): 33-40.

[3] Xu Tao. Research on the development status and application value of "block chain +" education [J]. Journal of Distance Education, 2017 (35): 19-28.

[4] Liang Shirong. On the characteristics of open education [J].Open Education Research, (1): 8-11.

[5] Sun Lihui.The change of the basic characteristics of Open Education-also on the Origin of MOOC [J]. Journal of Distance Education, 32 (2): 30.

[6] Yang Xianmin, Li Xin. The application mode and practical challenge of block chain technology in the field of control [J]. Research on Modern distance Education, 2017, (2): 34-45.

[7] Wu Yonghe, Cheng GE, etc. The research status, hot spot analysis and development thinking of "blockchain + education" at home and abroad [J].Journal of distance Education. 2020, (1): 38-47.

[8] Shao Yongbing. The application of block chain technology in education and teaching[j].Computer and information technology,2020 (February) Volume 28 No. 1: 74-77.

[9] Ding Baogen,Yang Shuwang. The reality problems and suggestions of the reform of "block chain + higher education"[J]. Modern Educational Technology, 2019 (07): 45-51.

[10] Wu Yonghe, Cheng singer, etc. The research status, hot spot analysis and development thinking of "block chain + education" at home and abroad [J].Journal of distance Education. 2020 (1): 38-48.

[11] Yuan Yong, Wang Feiyue. Development status and prospect of block chain technology [J].Journalof Automation. 2016 (4): 481,494.

[12] Xu Tao. The Application and Challenge of Block chain Technology in Education and Teaching in China [J]. Modern Educational Technology, 2017 (12): 108114.

[13] Shi Qiang. The influence of block chain technology on higher education in China in the future [J]. Exploration of higher Education, 2018 (10): 5-13.

THE COURSE SYSTEM OF DATA ANALYSIS FOR ECONOMIC STATISTICS MAJOR IN APPLICATION-ORIENTED UNIVERSITIES

Mingyu Lin
Guihua Han
Jianping Jun

School of Artificial Intelligence, Hubei Business College, Wuhan, China
School of Artificial Intelligence, Hubei Business College, Wuhan, China
School of Artificial Intelligence, Hubei Business College, Wuhan, China
E-mail:linmingyu2007@163.com
E-mail: hgh415@126.com
E-mail:gjdxjjp@whu.edu.com

Abstract:

In the era of artificial intelligence, the ability of data analysis has become one of the core capabilities of talent training in application-oriented universities. To train data analysis ability for economic statistical students as the guidance, combining with our economic statistics major and the current economic and social demand for talents, this paper constructed a data analysis course system for economic statistics major with the improvement of data analysis ability as the center, in order to better improve the ability and quality of students majoring in economic statistics, make them became new applied talents to meet the needs of enterprises and social development.

Key words: data analysis ability, competence and quality, application-oriented talent cultivation

1. Introduction

With the information technology revolution entering the big data era, big data has been widely used in many fields and has become a national strategic resource. As an economic power, China urgently needs to improve its data control ability. From the national level, it is urgent to improve the top-level design and maintain national security to fully implement the national strategy of big data. At the same time, the current market economy has undergone tremendous changes. Various industries use information technology for work, generating a lot of data and information, which requires department employees to master certain data analysis ability. No matter from the perspective of national policies or market supply and demand, it is urgent to strengthen the training of data analysis talents and make up the shortage of talents.

China's Internet companies represented by Baidu, Tencent and Alibaba and Huawei company who represented by infrastructure and intelligent terminal provider put forward a clear demand for big data analysis talents in recent two years, The traditional talent demand market, which mainly focuses on mastering C, C++ and Java, has been suffered a great innovation of the new talent demand with Python language in recent years.

Python language become a popular programming language with its refining syntactic, lightweight operational efficiency and powerful open-source library of scientific computing, and is no longer restricted to the computer industry, the finance, aviation, business and other industries with huge amounts of data production capacity also show an urgent demand for Python data analysis, so it is highly regarded by colleges and universities in all majors. [1]

2. Analysis of the data analysis course system of economic statistics major

With the advent of big data technology and artificial intelligence era, the capability of data analysis has become increasingly prominent in the training of economic statistics professionals in application-oriented universities. [2]

Hubei Business University is a local private undergraduate college, but it has always been based on the specialty subjects, keeping up with the development trend of information technology, and has started to recruit undergraduates majoring in economic statistics in the direction of economic big data since 2017, focusing on training data analysis talents to meet social needs, in order to meet the requirements of the times development and the new situation of personnel training. We are facing new opportunities, new challenges and new responsibilities in the professional and disciplinary construction under the new situation.[3]

Therefore, in order to adapt to the times development and keep pace with the times, the capability of data analysis is one of the indicators of students' expected graduation requirements in the 2020 professional training program of our university. The data analysis capacity development framework is shown in Figure 1 below:

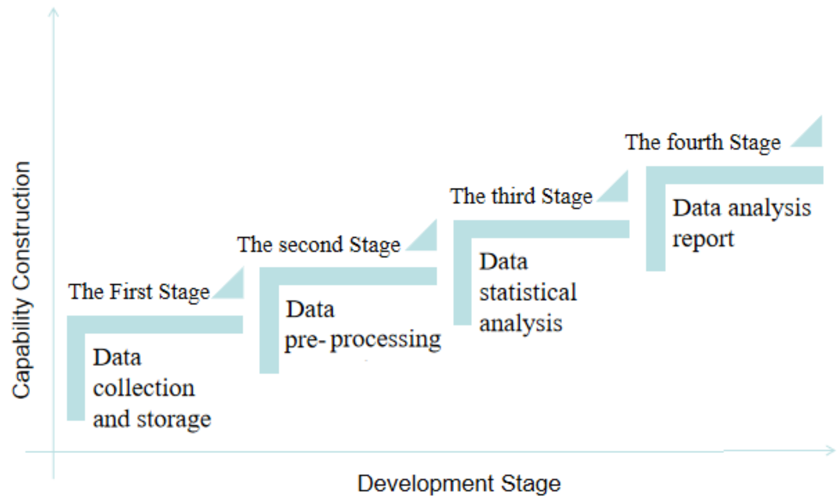


Figure 1: Data analysis capability construction development framework

Data analysis capability is divided into four stages: data collection and storage, data pre-processing, data statistical analysis and data analysis report. According to data analysis capability cultivation of different stages, it is necessary to set up different courses to meet the requirements of capability training, thus, the course system of data analysis oriented by data analysis capability is established to cultivate students' professional skills, data analysis capability and social ability.[4]

For this purpose, it is a goal to cultivate the data analysis capability of students majoring in economic statistics, let students have data thinking ,could master the methods of data analysis to solve practical problems in the economic field. So this paper analyzes the present situation of the data analysis capability of the economic statistics major, combining the demand for talents in the current economic society, builds the data analysis course system of economic statistics to improve the data analysis capability of students of economic statistics from integrating and optimizing the specialized courses, defining the subject emphasis, and changing the teaching idea, focus on team building and other aspects.

2.1 Integration and optimization of professional courses

Data analysis courses of economic Statistics are integrated based on the training of data analysis capability, as shown in Figure 2 below:

Courses before integration	
Course Type	Course Name
Compulsory	Access Database Principles and Applications
Compulsory	Statistical Analysis Software
Compulsory	Multivariate Statistical Analysis
Compulsory	Time Series Analysis

Courses after integration	
Course Type	Course Name
Compulsory	SQL Server Database Principles and Applications
Compulsory	Python Language Program Design
Compulsory	Data Analysis and Processing
Compulsory	Data Mining
Compulsory	Data Visualization
Elective	Machine Learning

Figure 2: Integration of data analysis courses for economic statistics majors

As shown in Figure 2, the data analysis courses of economic statistics includes many compulsory courses, we integrate the relevant courses of this major and form a new curriculum system to promote student data analysis ability as the core: part of the course are replaced according to the data analysis development framework, such as "Access Database Principles and Applications" is changes to "SQL Server Database Principles and Applications"; "Statistical Analysis Software" is changed to "Python Language Program Design", making it clear that Python is the programming language used to improve the data analysis capability;

The courses of "Multivariate Statistical Analysis" and "Time Series Analysis" are integrated into "Data Analysis and Processing", "Data Mining", etc. Meanwhile, "Data Visualization" is added as a new compulsory course; and "Machine Learning" is added to further deepen the data analysis capability as elective course.

2.2 Determination the emphasis of major courses

After determinate the relevant courses, combing the stage of data analysis capability training, and on the basis of respecting the internal logical correlation between the courses, the course setting time should show the internal correlation step by step, and set the teaching term and course teaching objectives, as shown in table 1.

Table 1: Study semester and teaching aims of economic statistics' data analysis courses

Course Name	Study Semester	Teaching Aims
SQL Server Database Principles and Applications	2	Master T-SQL language, focus on query operation and application development methods,have the basic skills of using database tools to develop database application system
Python Language Program Design	2	Master Python grammar, and have certain programming ability and thinking
Data Analysis and Processing	3	Master python language for data preprocessing, including data cleaning, data integration, data transformation, data protocol, etc
Data Mining	4	Master python language for data analysis, including descriptive analysis, exploratory analysis, data model, etc.
Data Visualization	5	Master python language for data visualization, analysis reports and results support decision making.
Machine Learning	6	Understand relevant algorithms for data analysis, and be able to use Python language to implement algorithms for mining useful data information

As shown in Table 1, "Python Language Programming", as a programming language for data analysis capability, is a guide course, which is set in the second semester and mainly involves the learning of data sources, acquisition methods, storage tools and other knowledge, and serves as the programming language foundation for subsequent courses. Follow-up courses such as "Data Analysis and Processing" is set in the third semester, which mainly emphasizes the use of Python's Numpy and Pandas libraries for data preprocessing, including data cleaning, data integration, data changes and data protocols, etc. "Data Mining" is set in the fourth semester, mainly focuses on data analysis to extract useful information hidden in the data, including descriptive analysis, exploratory analysis and data model analysis. "Data Visualization" is set in the fifth semester, mainly emphasizes data visualization using Python's Matplotlib library to generate analysis reports and make the results support decision making. "Machine Learning", as an elective course, is set in the sixth semester, which mainly focuses on understanding relevant algorithms of data analysis and can use Python language to realize algorithm mining of hidden valuable information in data.

At the same time, the key points of each course are defined according to the stages of training the data analysis capability, and then according to the important and difficult points of the course as well as the requirements of the total school hours, the course hours should be set reasonably, it is necessary to raise the proportion of practical school hours. The proportion of practical teaching such as Data Analysis and Processing, Data Mining, Data Visualization and Machine Learning is as high as 50%,in order to ensure that the courses are targeted to improve the students' data analysis capabilities. The class hours of data analysis courses are set as follows in Table 2:

Table 2: Class hours setting of economic statistics data analysis courses

Course Name	Total class hours	Theory class hours	Practical class hours
SQL Server Database Principles and Applications	48	32	16
Python Language Program Design	48	32	16
Data Analysis and Processing	48	24	24
Data Mining	32	16	16
Data Visualization	32	16	16
Machine Learning	32	16	16

2.3 Changing the teaching concepts

On the premise of teaching general rules, the data analysis curriculum system of economic statistical as data analysis capability oriented should adopt as integrated as possible a variety of teaching methods such as Project Teaching Method, Case Teaching Method, Scene Teaching Method and so on to according to the difficulties and characteristics of the course. We should pay attention to the reform of course teaching mode according to the different development stages of data analysis capability construction to choose appropriate teaching methods, provide a variety of learning modes of knowledge for students. And in this way, it is a useful to promote the students could use what they have learned theories and methods to solve practical engineering problems, so as to improve their capabilities of data analysis, enhance students' professional competence in future employment.

We need change the course teaching concept, lay emphasis on expounding the ideas behind the relevant statistical methods, teach the students to get the relevant statistics results with the help of data analysis software and make correct judgments according to these results, improve the course efficiency, and effectively cultivate the students' capability to solve practical problems.

2.4 Focus on building learning teams

Economic statistics major involves interdisciplinary, mutual communication between teachers of different research directions, which can promote discipline construction and integrate teaching resources. At the same time, the case teaching method and other methods are applied comprehensively, which is continuous deepening of new knowledge and new ideas, led the students to effective communication, could constantly burst forth new ideas. It will stimulate the continuous diffusion of students' thinking, and promote students' learning. Therefore, attention should be paid to the formation of learning teams, encouraging teachers and students to communicate and interact with each other, and promoting the construction of students' knowledge system.

3. Conclusion

Under the current background, colleges and universities should attach importance to the construction of data analysis capability in the training of economic statistics professionals. To train data analysis capability of economic statistical students as the guidance, this paper constructs a data analysis course system for economic statistics major with the improvement of data analysis capability as the center from the integration and optimization of professional courses, determination the emphasis of major courses, changing the teaching concepts and focus on building learning teams, in order to better promote economic statistics student capability of data analysis.

References

[1].Qin Ke,Liu Guisong. A Preliminary Study on university Teaching Reform for Python Application [J], Computer Education, 2017(9):21-25.

[2].Kong Lingbo. The construction of data Analysis course for cultivating undergraduates' Business Thinking Ability, Computer Education, 2019(2): 131-139.

[3].LIU Jun, LIU Fu-xiang, CUI Sheng. On the Data Analysis Capability Oriented of the Teaching System of Probability Theory and Mathematical Statistics under the Background of Emerging of Engineering Education[J].Education Teaching Forum, 2020,4(18):200-202.

[4] Kristen Schiele, Steven Chen. Design thinking and digital marketing skills in marketing education: a module on building mobile applications. Marketing Education Review, 2018,28(3).

UNDERSTANDING STUDENT'S EXPECTATION OF QUALITY OF LIFE AND CO-CURRICULUM ACTIVITIES IN BUSINESS EDUCATION

Panupong Pituksung[1], Salin Pituksung[2], Auengporn Pituksung[3,] Chidtaphol Pongprueksa[4], Chariya Korsukthaweekhoon[5], Sornkanok Apichanapong[6]

[1-6] School of Business Administration, Raffles International College
[*]**Corresponding author, E-mail:** panupongp@rafflesinternationalcollege.ac.th

Abstract

Quality of life and co-curriculum activities are highly accepted as an important factor in business education, as an objective of this paper is to identify the importance of student's expectations toward quality of life and co-curriculum activities in School of Business Administration, Raffles International College. Ten Focus-groups of students are applied to investigate quality of life and co-curriculum expectation in Bachelor degree students. The students from this Business Administration faculty were asked about their quality of life and co-curriculum expectations from School of Business Administration. This research paper identify that the most important factor based on the students in the business administration program expects to understand the way to conduct their own business, quality of facilities, quality of school, quality of students, Industry Interaction. Each of these criteria was explained and discussed.

Keywords: Service expectation, Higher education.

Introduction

Nowadays, Thailand have many higher education institution which mixed between public and private organization. All of institution must follow the regulation from Ministry of Higher Education science research and innovation which in the past they are all under the ministry of education. This is the good example for unstable policy which make the direct impact to students. The purpose of this paper is to identify the dimension of service expectation in business education in Thailand. The literature suggests that some studies integrate the expectation of service quality within the context of business education. The intention of the study will pay attention to the respective of service expectation of the students in School of Business Administration in Raffles International College Bangkok. Higher education is necessary for continuous improvement to the quality of service provide to the students. The contribution of the study is necessary to the management of business schools in higher education to continually develop the quality of the business education as the expected and required by the students. The study commences with a literature review related to the service expectation and business education, followed by the research methodology, which is provided in the next section. Finally, the findings of the study are discussed and concluded.

Co-curriculum and Quality of life

Co-curriculum activities in business education play the important roles to improve the quality of education which support the theory knowledge of student and also be a part of evaluation which allow student to learn from simulate situation.

The quality of life also can declare as facilities, environment, number of students and teachers, and etc. The quality of life play as the optional criteria for students for desire to study in universities. However, curriculum it self and university's reputation also play as the core value for students.

1.1 Workshop co-curriculum

The workshop curriculum is the activity that allow student to apply their knowledge from class and use in the stimulate situation. The result from workshop curriculum also reflect the soft skill from students such as teamwork, complex problem solving, creative thinking and etc.

1.2 Internship

Internship is one of the most popular co-curriculum activities which normally conduct in the last semester. Moreover, one of the most important factor that effect to the effectiveness of internship is the organization that accept the student to work as employees. The student who have experienced in internship program must work in that particular company. Some organizations allow student to move from one department to another department this can generate different point of view for students and allow them to understand more about organizational behavior.

Research Objective (s)

The objective of this research paper is to identify the relationship between student's expectation in co-curriculum activities and quality of life in the university. On the other hands, researchers also want to identify the relationship between student's expectation and co-curriculum activities. The result of this research paper will allow researcher to apply to the teaching method within School of Business Administration, Raffles International College.

Literature Review

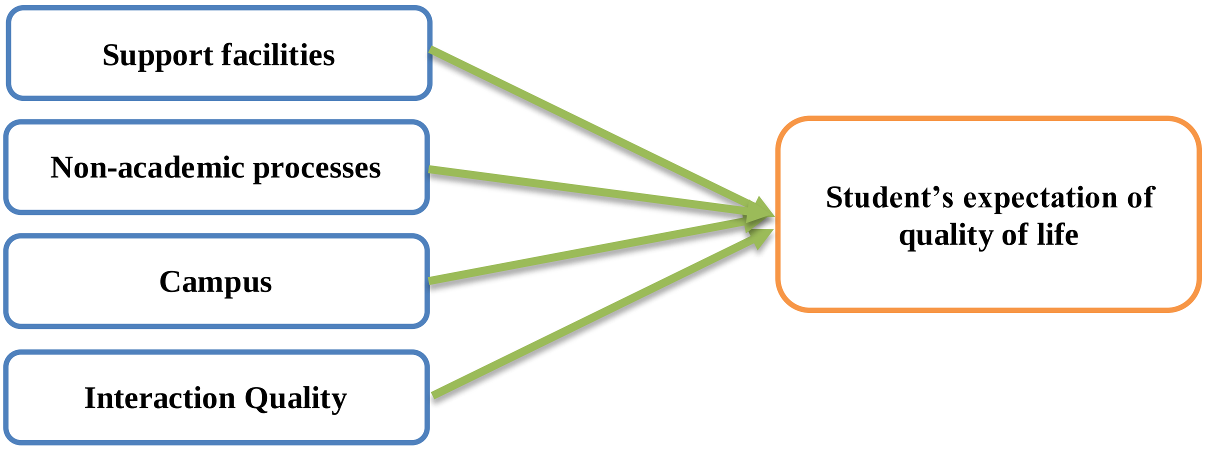
Due to the literature review of service quality and in the field of higher education, the dimension of the service quality of this study is developed from the study of Dagger et al. (2007), Brady and Cronin (2001) and Dabholkar et al., (1996). Which they describe the effect from co-curriculum activities toward student's satisfaction such as for business students, they prefer to get some activities that allow them to practice their business knowledge in real life situation. The study identifies business administration dimensions, in higher education by the students from faculty of business administration. The two mainly dimensions are program quality and quality of life (Rajani et al., 2011). Based on research result from Rajani show that the two factors that generate highest student's satisfaction is program quality and quality of life. Program quality can measure by the quality of lecturers, study materials, curriculum and activities. On the other hands, quality of life can measure by facilities, environment, campus's location and in class social interaction. The quality of life in higher education divided to support the facility, interpersonal relationships, non-academic activities and camps.

Service quality and in the field of higher education, the dimension of the service quality of this study is developed from the study of Dagger et al.'s (2007), Brady and Cronin's (2001) and Dabholkar et al., (1996). The study identifies business administration dimensions, in higher education by the students from faculty of business administration. The two mainly dimensions are program quality and quality of life (Rajani et al., 2011. The quality of life in higher education divided to support the facility, interpersonal relationships, non-academic activities and camps. Higher education is necessary for continuous improvement to the quality of service provide to the students. The contribution of the study is necessary to the management of business schools in higher education to continually develop the quality of the business education as the expected and required by the students. The study commences with a literature review related to the service expectation and business education, followed by the research methodology, which is provided in the next section. Finally, the findings of the study are discussed and concluded.

Methodology

Qualitative method was used to investigate the student opinion related to the student's expectation in business education in Raffles International College Bangkok. Focus-group data were collected from Business Administration students by Raffles International College Bangkok.

Participants were recruited from the school website. The intention of the study was to reach a varied level of the Business Administration students. The purpose of the focus group is to understand the student expectation of service offered by the business administration program at Raffles International College Bangkok not to generalize to all populations. To assure that all of students have the chance to answer in the discussion ten focus groups were conducted. The research planned to ensure 6-8 participants per focus group. Researchers have spent around 1 hour per group for interview. Therefore, ten focus groups of students were managed with ranged from six to eight. We recorded each focus group on audio tape and transcribing the CDs in to analyze the data.



Results

Quality of Life

In the framework model, quality of life is defined as the second primary aspect. The objective of analyzing this aspect is how lively and comfortable of the stay of students who study in business administration program during the whole length of academic years. The students spend a substantial time of their life during their age inside the university's campus; hence the student's social life in campus becomes one of the most crucial factors in defining perceived service quality of the university.

Based on 'Does higher education service quality affect student satisfaction, image and loyalty' (Ali et al., 2016), the result confirmed that students who have positive perceptions of non-academic aspects will have higher levels of satisfaction.

The magnitude of quality of life in the framework model is determined by the emulated four sub-dimensions:

1. Support facilities

With regard to the hospitalities, recreational and other facilities available in the university's campus, it can be found that students who study in business administration program prefer to have co-working space in campus. This reflected in the nature of program and student's behavior that based on project and adaptive activities. Most students inform that co-working space is one of the most essential facilities to create teamwork skill, connection and creativity. Nevertheless, rest area garden and library are also considerable. In case of rest area, students prefer to have enough rest area to be a meeting place and also their space for preparation before class. Surprisingly, green area in university is also preferred by students who study in business administration program. The reason is they believe that the good environment will create positive support to educational performance. Based on our focus group interview, it's about one third that concerns in this topic.

2. Non-academic processes

Non-academic processes can divided into collateral curricular activities, social response activities, suggestion services, character development activities which are some of the non-academic processes emerge from school of business administration.

Most students expect to get a business field trip as the priority requirement. The reason to support this result is students would like to gain business idea, business opportunities, connection and experiences from genuine business person. However, comparing to non-academic process performance, it can conclude that business administration program in private universities is attempting to create a business field trip program to serve their students' expectation. The frequency of the business field trip program is approximately once a year, both domestic and international. Secondly, they prefer to affiliate with social responsibility activity in order to generate social enterprise to gain both profit and social responsibility. In addition, students in business administration program prefer some of special courses which are included by personality improvement, music and other social interaction activities. By giving reasons to support as an entrepreneur is a kind of business person who have their own corporate, that is, they need good connection and good relationship between stakeholders and companies. All of the above skills are very vital to maximize their benefit.

3. Campus

In term of this sub-dimension campus can separate into two major topics; location and campus environment.

A number of students in the business administration program expect good campus environment and good location to serve their transportation and campus life.

Whilst they mention about the parking lot which based on private university student in Thailand, the cultures of students are greatly different from a public university. Because of preference of private university, students are more materialistic, this make most students drive to school. This causes a problem of not suffice parking lot to serve student's demand.

Additionally, the facility around campus for example convenience stores, sport complexes, restaurants and dormitories provide better response to student's demand.

4. Interaction Quality

The interaction quality consists of two levels. At first, the service is passed through an interaction between two dimensions, namely, the service facilitator which is the instructors and customer which is business administration program's student.

Secondly, a student's quality realization regarding service can be persuaded by other student's attitudes and behaviors. In case of student's expectation toward interaction quality, a large number of students prefer to have a strong relationship with their instructors, since instructor can employ experiences and consult for their business. Moreover, business administration program mostly base on activities and projects that make instructors have to coach students closely. Instructor's quality and background can generate competitive advantage in term of business connection and opportunities; hence students in business administration program can find opportunities to conduct their businesses such as a supplier, point of sales, advertising, production and financial consulting.

Consequently, all of the instructors in business administration program have also been an entrepreneur which convinced them to create the strong interaction with students.

To compare with the student's actual experiences, this can conclude that most students who study in business administration program in private universities are mainly satisfied with interaction quality

Discussion

The qualitative study of this paper is to study the student expectation toward business education in faculty of business administration. An analysis of the focus-group of business administration student of private university indicated that the six areas of students expectation. These are: curriculum; academic facilities; industry interaction; input quality; support facilities; non-academic processes; campus and interaction quality.

In this study, the student of business school expects the real life business experience from lecturers. Especially, the study expects to learn from entrepreneur to obtain real experience from the entrepreneurs. Some of the results in this study align with the study of Taatila (2010) who suggests that the entrepreneurship education can be real-life entrepreneurial problems. The lecturers who are real entrepreneurs in SMEs attempt to educate the student by develop the creativity mind-set of the student to think similar to the entrepreneurs. This result is partly consisting with the study of Orlandi (2010) who demonstrates that design education should conduct an innovative and creative mind-set of the students. Additionally, the findings of Shah and Brown (2009) also recommend that the student require the quality of teacher and the courses as important factor to support their university choice.

In order to develop new knowledge, imagination, and creativity, the prior knowledge should be upside down (Seelig, 2012; Ward, 2004). In this study, the lecturer who is real entrepreneur is lack of theoretical knowledge therefore, no theoretical knowledge offers to the students in real-life entrepreneurial business experience class. Moreover, the study of Solomon (2007) also suggest that entrepreneurship program should be develop from the normal teaching methods of lecturers, the guest speakers, case studies and role models method are suggested.

The student of entrepreneurship program also requires the connection from friends, alumni, lecturer and entrepreneurs. This view of the results accord with the study of Vollmers et al., (2001) who present that in order to develop the entrepreneurship education should be included business community, alumni, educators of local and regional area. Similarly to the study of Czuchry et al,. (2004) who demonstrated that the stakeholder in the entrepreneurship education should be industry and community

Conclusion

Based on conceptual frame work, it can separately describe student satisfaction as two dimensions which are included by program quality and quality of life. In terms of program quality, it can be divided into 4 sub-categories which are included curriculum, industry interaction, input quality, and academic facilities. However, in case of quality of life, it can separate into 4 sub-categories which are contained support facilities, interaction quality, campus and non-academic processes. The result confirmed that students who have positive perceptions toward the curriculum issue will have higher levels of satisfaction. The comparison between 'Does higher education service quality affect student satisfaction, image, and loyalty' and our literature are similar to the result which there is positive relationship between curriculum expectation and student satisfaction, whilst non-academic aspects impact to overall student satisfaction significantly. In case of 'Comparing alternative instruments to measure service quality in higher education' (Brochado, 2009), the topic of non-academic aspects, academic aspects and program issue support to the outcome of this study. In addition, 'Identifying satisfied/dissatisfied service encounters in higher education' (Chahal and Devi, 2013) is described about teaching, library, computer laboratories, administration and infrastructure briefly. Regarding of teaching, it conforms to the input quality of instructor which can generate student satisfaction toward the institution. The study found that quality of instructor must include by expert knowledge and out-standing entrepreneurial experiences. Secondly, library and computer laboratory are one of the most concern of students who study in entrepreneur program. The reason to support is computer laboratories are also highly preferred from students. In case of launching new products or services, they must conduct their research or generate consumer insight information for minimizing their risk. The computer laboratories can also be their great learning material for self-study and searching their business opportunities. Meeting rooms are also important for entrepreneurial students. Because of having several group assignments and projects, it would be better to provide them a place to exchange an idea and to corroborate. The academic facilities also can improve their performance in term of the student's activities.

Finally, the study found that student who studies in entrepreneurship program prefer to have co-working space on campus. This reflects on the nature of program and student's behavior, which based on project and adaptive activities. A great of students inform that co-working space is one of the most important facilities to create teamwork skill, connection and creativity. Nevertheless, rest area, garden and library are also significant. In case of rest area, students prefer to have enough rest area to be a meeting place and also be their space for preparation before class. Surprisingly, green area in university is also preferred by students who study in entrepreneurship program. The reason is they believe that the good environment will create positive support to educational performance. Based on our focus group interview, it's about one third that concerns with this topic.

References

Ali et al.,: "Does higher education service quality effect student satisfaction, image and loyalty?: A study of international students in Malaysian public universities", Journal of Quality Assurance in Education, Vol. 24 Issue: 1, pp.70-94 (2016)

Brady, M.K. and Cronin Jr, J. : "Some new thoughts on conceptualizing perceived service quality: hierarchical approach", Journal of Marketing, Vol. 65 No. 3, pp. 34-9 (2001)

Brochado, A. : "Comparing alternative instruments to measure service quality in higher education", Quality Assurance in Education, Vol. 17 No.2 (2009)

Czuchry, A., Yasin, M. and Gonzales, M. : "Effective entrepreneurial education: a framework for innovation and implementation", Journal of Entrepreneurship Education, Vol. 7 No. 1, pp. 39-56 (2004)

Dabholkar, P.A., Dayle, I.T. and Joseph, O.R. : "A measure of service quality for retail stores: scale development and validation", Journal of the Academy of Marketing Science, Vol. 24, pp. 13-6 (1996)

Dagger, T.S., Sweeney, J.C. and Johnson, L.W. : "A hierarchical model of health service quality: scale development and investigation of an integrated model", Journal of Service Research, Vol. 10 No. 2, pp. 123-42 (2007)

Hardeep Chahal and Pinkey Devi. : "Identifying satisfied/dissatisfied service encounters in higher education", Quality Assurance in Education, Vol. 21 No.2 (2013)

Orlandi, A.E.C. : "Experimental experience in design education as a resource for innovative thinking", Procedia Social and Behavioral Science, Vol. 2 No. 2, pp. 5039-5044 (2010)

Rajani J., Gautam S., Sangeeta S. : "Conceptualizing service quality in higher education",Asian Journal on Quality, Vol. 12 Issue: 3, pp.296-314 (2011)

Seelig, T. : “InGenius: A Crash Course on Creativity”, HarperCollins, New York, NY (2012)

Shah, M. and Brown, G. : “The rise of private higher education in Australia: maintaining quality outcomes and future challenges”, Proceedings of the Australian Universities Quality Forum (AUQF), AUQA, Alice Springs, pp. 143-150 (2009)

Solomon, G. : “An examination of entrepreneurship education in the United States”, Journal of Small Business and Enterprise Development, Vol. 14 No. 2, pp. 168-82 (2007)

Taatila, V.P. : “Learning entrepreneurship in higher education”, Education + Training, Vol. 52 No. 1, pp. 48-61 (2010)

Vollmers, S.M., Ratliff, J.M. and Hoge, B. : “A Framework for Developing Entrepreneurship Curriculum through Stakeholder Involvement” Morehead State University, Morehead, KY (2001)

Ward, T.B. : “Cognition, creativity, and entrepreneurship”, Journal of Business Venturing, Vol. 19 No. 2, pp. 173-188 (2004)

董事会监督视角下高管团队教育背景异质性对企业研发投入的影响研究

THE IMPACT OF THE HETEROGENEITY OF THE EDUCATIONAL BACKGROUND OF THE SENIOR MANAGEMENT TEAM ON ENTERPRISE R&D INVESTMENT FROM THE PERSPECTIVE OF THE BOARD OF DIRECTORS

斯琴高娃白
Siqingaowa Bai

泰国正大管理学院
Panyapiwat Institute of Management, Thailand
***Corresponding author: Siqingaowa Bai**, **E-mail:** 1137381421@qq.com

摘要

研发能力是企业保持竞争地位至关重要能力，本研究分析董事会监督下高管团队教育背景异质性对企业研发投入的影响。通过对 2014-2018 年中国上市公司进行实证分析，发现高管团队教育背景异质性越大，不同认知和价值观的高管会带来沟通成本，降低研发决策的效率。而董事会监督能力越强，监督管理者为获取短期利益放弃研发投资的行为，提高企业的研发活动与研发投入。董事会监督能力越强，董事会越有话语权干预高管团队异质性对企业行为决策——研发投入的负面影响。因此，企业应当增加高学历管理者，加强董事监督，帮助高管作出正确的战略决策。

关键词：研发投入 高管团队教育背景异质性 董事会监督

Abstract

R&D capabilities are crucial for companies to maintain their competitive position. This study analyzes the impact of the heterogeneity of the educational background of the senior management team under the supervision of the board of directors on corporate R&D investment. Through an empirical analysis of listed companies in China from 2014 to 2018, it is found that the greater the heterogeneity of the educational background of the executive team, the higher the heterogeneity of the executive team’s educational background, the higher the level of communication costs of executives with different cognitions and values, which will reduce the efficiency of R&D decision making. The stronger the supervisory ability of the board of directors, the behavior of supervisory managers to abandon R&D investment in order to obtain short-term benefits, and increase the enterprise's R&D activities and R&D investment. The stronger the supervisory ability of the board of directors, the more the board of directors has the right to intervene in the negative impact of the heterogeneity of the senior management team on corporate behavioral decisions-R&D investment. Therefore, companies should increase the number of highly educated managers, strengthen director supervision, and help senior managers make correct strategic decisions.

Keywords: R&D investment, heterogeneity of the educational background of the senior management team, board supervision

引言

科技是企业创造价值的重要手段与途径，更是企业以及国民经济发展的根基。随着市场竞争的加剧，企业需要不断提高产品和服务的创新性，才能得到稳定的发展。而研发活动作为企业重要的战略决策，需要企业所有高管共同决策，但不同管理者有不同的经验、认知和价值观，这些个人特征都会在一定程度上影响战略决策的制定。因此，高管个人特征对研发战略等重要战略的影响不容忽视。

学者 Becker（1970）、Kang, Y.L., Huang, G.L., & Chen, K.J.（2011）提出高学历的管理者更能接受技术创新。关于高管教育背景与企业研发投入的相关性，Liu,B., et al.（2015）、Zhang, M.M., & Duan, H.Y.（2015）研究发现高学历管理者，能够更快的应对环境中的不确定性，具有较强的处理复杂事情的能力。 Alexiev（2010）、Li, T.（2014）提出高管教育水平异质性越大，高管团队越具备多元思维，更能主动接受创新决策与战略，从而不同的意见越有利于企业研发的投入。但是也有学者认为高管团队教育背景异质性会对研发产生消极的影响，而 Wang, Y.N., & Song,T.（2013）、Liu, X.M., et al.（2017）则发现高管教育背景的差异，使他们在进行高风险的创新决策时，很难达成一致的决策，从而对研发投入产生消极的影响。

另外，Miller 与 Triana（2009）通过研究董事会人力资源对企业研发投入的影响，发现董事会性别的多样性能够有效提升研发投入。另外，Wincent 等（2010）认为董事会教育水平、网络多样性同样会对企业研发战略及研发绩效产生影响。Li, X.Q., & Hu, C.X.（2016）以中国上市公司为样本，进一步验证了董事会的教育水平越高，越有利于企业研发创新能力的提升。同时，Chen 与 Hsiang（2014）则是针对董事会关系网络，分析董事会人力资本对研发投入有促进作用。

虽然许多学者分析了高管团队教育背景异质性对研发投人的影响，但是得到的结论并不一致。考虑目前中国企业普遍存在研发投入不足的现状，本研究思考高管团队的教育背景异质性特点与企业研发投入存在怎样的相关性？而董事会能够充分发挥监督作用，通过监督遏制高层管理者的机会主义行，并缓解目前企业研发投入不足的状况？基于对这些问题的思路，本研究考察董事会监督能力、高管团队异质性与研发投入三者的相关性。

理论综述与研究假设

1. 基本理论

1.1 委托代理理论

企业股权结构的分散引起了所有权与控制权的分离，股东拥有公司的所有权，并委托职业经理人在以股东权益最大化的前提下，管理和经营企业日常事务（Berle & Means，1932）。但是由于经理人是有限理性的，经理人期望达到自身效用最大化，并不能完全以股东利益最大化为前提进行决策，由此产生了委托代理问题。企业创新是一项风险大、短期收益少的工作，因此管理者很可能为了企业短期业绩目标以及个人利益，减少研发投入。而创新是企业长期发展的保障，关系到所有股东的长期收益。如何规避管理者的机会主义行为，缓解委托人（股东）与代理人（经理人）之间的利益冲突，需要完善的内部治理机构。董事会是沟通股东与经理人的桥梁，负责高管薪酬制度的制定、战略决策的审批和监督。董事会能够监督与制约管理层，减少管理者的投机行为，保护股东权益。由此可见，除了良好的激励措施，监督对一个企业的发展和经营也是至关重要的，能够减少企业风险和利益冲突，促进企业的发展。因此，本研究在考察高管行为对研发投入的关系时，考虑董事会监督对高管行为选择的影响，使研究逻辑更严谨。

1.2 高层梯队理论

Hambrick 与 Mason（1984）首次提出高层梯队理论（Upper echelons theory），他们认为高管的人口特征能够在一定程度上反映高管的认知、价值观，从而影响高管的行为选择，不能够最终影响企业的绩效。高层梯队理论主要包括三个方面：第一，企业管理者的个人认知和价值观会影响其对事物的理解，从而做出不同的战略选择。第二，管理者的年龄、性别、任期、教育背景等可观测的背景特征，能够在一定程度上决定他们的认知能力和价值观。第三，企业绩效与企业管理者的个人能力密不可分，管理者不同的战略选择和决策会影响企业的最终绩效。这三个方面的特点，构建了最早的高层梯队理论，从此众多学者开始关注高管特征对企业发展的影响。

2. 研究假设

2.1 高管团队教育背景异质性对研发投入的影响

1984 年 Hambrick 和 Mason 提出了高层梯队理论[1]，提出在应对复杂的内外部环境时，高管团队（Top Management Team）对企业经营管理拥有决策权和控制权，并为企业发展制定、执行战略计划如投融资计划、研发计划等。由于每一位高管都是独立的个体，他们学历的差异决定了他们不同的专业知识、学习能力以及信息的收集和处理能力。当团队内高管的教育背景差异较大时，不同的思维方式、认知和价值观会加剧团队内的矛盾，增加交流成本，降低决策效率，从而不利于企业研发战略的制定（Liu, X.M., et al., 2017）。即高学历管理者和低学历管理者的比例差异越大，企业研发投入越少，据此提出本研究的假设 1。

假设 1：高管团队教育背景异质性与研发投入呈负相关关系。

2.2 董事会监督能力对研发投入的影响

董事会不仅能为企业提供资源和咨询服务，还能监督高管团队的行为决策，保障股东的权益（Boyd, et al, 2011）。基于委托代理理论，高管最为企业的代理人，与委托人存在利益冲突而创新是企业长期发展的保障，关系到所有股东的长期收益，而高管为了自身利益最大化，很可能存在机会主义行为，规避个人风险。特别是研发投入是一项高风险的战略决策，并且不能为企业带来短期收益，甚至还会损害企业的短期企业绩效，因此一些高管会减少对研发战略的投入，维持自身薪酬与职位的安全性。但是研发是有利于企业的长期发展的，同时决定了企业未来在市场中的竞争优势，因此股东是更愿意承担研发所带来的高风险的。这时董事会的作用便是监督企业的研发活动顺利开展，保障足够的研发投入，因此本研究认为董事会监督能力越强，研发投入越多。据此提出本研究的假设 2。

假设 2：董事会监督能力与研发投入呈正相关关系。

2.3 董事会监督能力对高管团队教育背景异质性与研发投入的调节效应

高管团队成员的教育背景异质性会影响高管的战略选择——研发投入。首先，由于管理者学历的不同，使他们有不同的价值观和认知观，因此他们对公司经营、财务决策和战略决策有不同的见解，高管团队教育背景异质性过大，会增加管理者的交流与沟通成本，降低企业研发决策的效率。由此可见，不同高管团队教育背景异质性会对高管的行为选择造成不同的影响。

但是，由于企业创新是一项风险大、短期收益少的工作，因此管理者很可能为了企业短期业绩目标以及个人利益，减少研发投入。要规避管理者的机会主义行为，必须完善企业的内部治理机构。而董事会具备专业的知识和丰富的管理经验，能够对管理者的战略决策

[1] Hambrick, D. C. , & Mason, P. A. . (1984). Upper echelons: the organization as a reflection of its top managers. Academy of Management Review, 9(2), 193-206.

进行审批和监督，减少管理者的投机行为，保护股东权益（Tan, J.S., et al, 2017；Zhong, X., et al., 2019）。由此可见，董事会监督能力越强，对高管团队异质性的干预性越强烈，因此会削弱高管团队异质性对其行为选择——研发投入的影响。因此本研究认为董事会监督能力对高管团队教育背景异质性与企业研发投入的相关性具有负向的调节效应，据此提出本研究的假设 3。

假设 3：董事会监督能力对高管团队教育背景异质性与研发投入的相关性具有抑制调节效应。

研究设计

1. 样本选择与数量来源

为检验高管团队教育背景异质性、研发投入与董事会监督之间的相关性，本研究选取 2014--2018 年中国上市公司为研究样本。并对全样本进行如下筛选：（1）剔除保险、金融行业的样本；（2）剔除 ST 和*ST 公司的样本；（3）剔除财务数据与财务数据不完整的样本。本研究的数据来源于国泰安金融数据库，另并利用 EXCEL，STATA12 等软件进行数据的整理和分析，最终得到 12048 个样本。

2. 变量定义

2.1 被解释变量——研发投入

企业的研发投入是衡量一个企业对研发的关注与投入，本研究参考 Zhao, X.G., et al（2012）等的研究，选取研发费用与营业收入的比值来衡量企业在研发的投入，即研发投入/营业收入。同时对该指标取绝对值衡量企业的研发投入的强度。

2.2 解释变量——高管团队教育背景异质性

本研究参考 He, W.F., & Liu, Q.L.（2010）的方法，通过对管理者的学历赋值（博士及以上为 5，硕士（包括 MBA）为 4，本科为 3，大专为 2，高中及以下水平为 1），然后利用 Blau 系数法对高管教育背景异质性进行计算，数值越大说明高管团队成员间的教育水平差异越大。

2.3 调节变量——董事会监督能力

董事会的监督就是为了解决在现代企业中，所有权与经营权分离所产生的的代理问题，从而降低代理成本。本研究参考 Desai（2016）、Guldiken 与 Darendeli（2016）的研究中对董事会监督能力的衡量方式，选取了影响董事会监督能力的重要因素两职合一（DUAL）、独立董事比例（RIND）和董事会持股（MHS）。董事会监督能力的衡量为 POWER= DUAL + RIND + MHS。

2.4 控制变量

为排除一些变量对企业研发投入的影响，本文选取公司规模（SIZE）、公司年龄（AGE）、股权集中度（TOP）、营销能力（PM）为控制变量，同时加入年度（YEAR）和行业（INDU）两个虚拟变量为控制变量。其中，公司规模（SIZE）根据企业的资产总数衡量，计算公式为 SIZE=Ln（总资产）。公司年龄（AGE）的计算为，AGE=Year（报告期）- Year（公司上市年份）。股权集中度（TOP）为公司第一大股东的持股比例，即 TOP=第一大股东持股比例。营销能力（PM）选取销售费用/营业收入衡量公司的营销投入强度，计算公式为 PM=销售费用/营业收入。

表 1: 各变量说明

变量类别	变量名称	变量符号	变量取值说明
被解释变量	研发投入	RD	研发支出/营业收入
解释变量	高管团队教育背景异质性	HEDUC	Blau 系数法计算，中专及中专以下取值 1，大专取值 2，本科取值 3，硕士研究生取值 4，博士研究生及以上取值 5
调节变量	董事会监督能力	POWER	DUAL+RIND+MHS
控制变量	公司规模	SIZE	企业资产总额的自然对数
	公司年龄	AGE	公司成立的年度，取值 1,2…
	股权集中度	TOP	第一大股东持股比例
	营销能力	PM	销售费用/营业收入
	年度	YEAR	企业年度虚拟变量
	行业	INDU	企业行业虚拟变量

3. 模型构建

为验证假设 1：高管团队教育背景异质性对研发投入的影响，构建模型 1。

（公式 1）

$$RD=\alpha_0+\alpha_1 HEDUC+\alpha_2 SIZE+\alpha_3 AGE+\alpha_4 TOP+\alpha_5 PM+\sum YEAR+\sum INDU$$

为验证假设 2：董事会监督能力对研发投入的影响，构建模型 2。

（公式 2）

$$RD=\alpha_0+\alpha_1 POWER+\alpha_2 SIZE+\alpha_3 AGE+\alpha_4 TOP+\alpha_5 PM+\sum YEAR+\sum INDU$$

为验证假设 3：董事会监督对高管团队教育背景异质性与研发投入相关性的调节效应，构建模型 3。

（公式 3）

$$RD=\alpha_0+\alpha_1 HEDUC+\alpha_2 POWER+\alpha_3 POWER\times HEDUC+\alpha_4 SIZE+\\ \alpha_5 AGE+\alpha_6 TOP+\alpha_7 PM+\sum YEAR+\sum INDU$$

实证分析

1. 描述性统计分析

全样本 2014--2018 年数据的描述性统计如下表 2 所示，本研究的被解释变量为研发投入 RD 最小值为 0.0000，最大值为 0.1057，均值为 0.0033，中值为 0.0000，标准差为 0.0116，由此可见样本企业多数并未在研发上投入资金，关注研发投入的企业非常有限。解释变量为高管团队教育背景差异 HEDUC 的最小值为 0.0000，最大值为 0.5123，均值为 0.1909，中值为 0.1874，标准差为 0.1062，由此可见高管团队成员之间教育背景差异不大，高管以本科学历为主。调节变量董事会监督能力 POWER 最小值为 0.3333，最大值为 2.5714，均值为 1.3844，中

值为 1.3333，标准差为 0.6940，说明样本企业董事会监督能力的差异还是很大的。

表 2: 所有变量的描述性统计

	N	Min	Max	Mean	Median	SD
HEDUC	12048	0.0000	0.5123	0.1909	0.1874	0.1062
RD	12048	0.0000	0.1057	0.0033	0.0000	0.0116
POWER	12048	0.3333	2.5714	1.3844	1.3333	0.6940
SIZE	12048	19.7791	26.1032	22.1536	22.0207	1.2077
AGE	12048	7.0000	31.0000	17.4000	17.0000	5.1330
TOP	12048	8.7156	74.2950	34.3447	32.7698	13.8281
PM	12048	0.0000	0.4709	0.0703	0.0443	0.0770

2. 相关性统计分析

表 3 的左下角是变量之间的 pearson 相关性检验，表 4.10 的右上角是变量之间的是 Spearman 相关性检验。表中所有变量相关性的系数（绝对值）均小于 0.4，由此可见各变量之间不存在严重的共线性关系。企业研发投入 RD 与教育背景异质性 HTENU 显著正相关，企业研发投入 RD 与董事会监督能力 POWE 显著正相关，由此可见假设 1 和假设 2 得到初步验证。

表 3: 变量 Pearson 与 Spearman 相关性分析

	HEDUC	RD	POWER	SIZE	AGE	TOP	PM
HEDUC	1	-0.0796***	0.1861***	-0.2411***	-0.2295***	-0.0265***	0.0921***
RD	-0.0410***	1	0.0601***	-0.0869***	-0.0429***	-0.0908***	0.1717***
POWER	0.2094***	0.0878***	1	-0.2023***	-0.1649**	-0.0863***	0.1876***
SIZE	-0.2338***	-0.0060	-0.2105***	1	0.2070***	0.0739***	-0.2772***
AGE	-0.2247***	-0.0527***	-0.1691***	0.1946***	1	-0.0282***	0.1045***
TOP	-0.0301***	-0.0818***	-0.1081***	0.0979***	-0.0408***	1	-0.0739***
PM	0.0632***	0.2125***	0.1442***	-0.1861***	-0.0669***	-0.0568***	1

注：左下角为 Pearson 相关性，左上角为 Spearman 相关性；***在置信度为 0.01 时显著；**在置信度为 0.05 时显著；*在置信度为 0.1 时显著。

3. 回归分析

3.1 高管团队教育背景异质性对研发投入的影响

表 4 的 Panel_A 是高管团队教育背景异质性对研发投入的影响分析，回归模型的调整 R2 为 0.08，F 检验系数为 42.22，且在 1%水平上显著，因此模型 3-1 通过验证。HEDUC 的系数为-0.01，T 值为-7.96，且在 1%水平上显著，由此可见高管团队教育背景异质性与研发投入呈显著负相关关系，即高学历管理者和低学历管理者的比例差异越大，企业研发投入越少，因此假设 1 得到验证。

3.2 董事会监督能力对研发投入的影响

表 4 的 Panel_B 是董事会监督能力对研发投入的影响分析，由表中结果可见，回归模型的调整 R^2 为 0.08，F 检验系数为 42.80，且在 1%水平上显著，因此模型 2 通过验证。董事会监督能力 POWE 的系数为 0.01，T 值为 4.19，且在 1%水平上显著，由此可见董事会监督能力与研发投入呈显著正相关关系。即企业董事会监督能力越强，企业投入的研发费用越多，因此假设 2 得到验证。

3.3 董事会监督能力对高管团队教育背景异质性与创新战略相关性的调节效应

表 4 的 Panel_C 和 Panel_D 是董事会监督能力对高管团队教育背景异质性与研发投入的调节效应分析结果，Panel_C 是调节效应检验的第一步，董事会监督能力 POWER 在 1%水平上与 RD 显著正相关，HEDUC 在 1%水平上与 RD 显著正相关。Panel_D 是调节效应检验的第二步，回归模型的调整 R^2 为 0.08，F 检验系数为 42.29，且在 1%水平上显著，因此模型 3 通过验证。乘积项 HEDUC*POWE 的系数为-0.01，T 值为-2.63，且在 1%水平上显著，而教育背景异质性 HEDUC 与 RD 的相关性由负相关变为正相关，但是相关性不再显著，说明加入了 POWER 的调节效应后，HEDUC 与 RD 的相关性发生的改变，同时由于 HEDUC 为正相关，而交互项 HEDUC*POWE 为负相关，可见董事会监督能力 POWE 对高管团队教育背景异质性与研发投入的相关性起到干扰作用，假设 3 得到验证。

表 4: 实证检验结果分析

		因变量：RD			
		Panel_A	Panel_B	Panel_C	Panel_D
自变量	HEDUC	-0.01 *** (-7.10)		-0.01 *** (-7.70)	0.01 (1.30)
调节变量	POWER		0.01 *** (4.19)	0.01 *** (5.15)	0.01 *** (4.95)
交互项	POWER*HEDUC				-0.01 *** (-2.63)
控制变量	SIZE	0.01 *** (6.74)	0.01 *** (8.46)	0.01 *** (7.22)	0.01 *** (7.16)
	AGE	-0.01 ** (-4.23)	-0.01 ** (-2.42)	-0.01 *** (-3.66)	-0.01 ** (-3.57)
	TOP	-0.01 *** (-7.70)	-0.01 *** (-7.28)	-0.01 *** (-7.30)	-0.01 *** (-7.20)
	PM	0.03 *** (21.47)	0.03 *** (21.13)	0.03 *** (21.06)	0.03 *** (21.07)
	YEAR	控制	控制	控制	控制
	INDU	控制	控制	控制	控制
常量	CONSTANT	-0.01*** (-3.93)	-0.02 *** (-6.73)	-0.01 *** (-4.84)	-0.01 *** (-5.11)
Adj_R2		0.08	0.08	0.08	0.08
F		44.22***	42.80 ***	43.63 ***	42.29 ***
N		12048	12048	12048	12048

注： ***P<0.01; **P<0.05; *P<0.1; 括号内为 T 值。

研究结论与启示

1. 研究结论

本研究用 2014-2018 年上市公司数据分析董事会监督能力、高管团队教育背景异质性与企业研发投入三者之间的相关性，通过实证分析得到以下研究结论。

（1）高管团队教育背景异质性与研发投入呈负相关关系。由于高学历的管理者具备更专业的知识、更强的学习能力与更高的新技术接受能力，当团队内教育水平异质性较高时，不同层次的看法会带来沟通成本，降低研发决策的效率。

（2）董事会监督能力与研发投入呈正相关关系。董事会从公司长远发展和股东利益为出发点，监督管理者为获取短期利益放弃研发投资的行为，为企业更多的研发活动与研发投入提供资源。

（3）董事会监督能力对高管团队教育背景异质性与研发投入具有负向调节效应。董事会监督能力越强，董事会越有话语权干预高管团队异质性对企业行为决策——研发投入的影响，董事会监督能力对高管团队教育背景异质性与研发投入的相关性起到干扰作用。

2. 研究启示

第一，增加高学历管理者，提升企业研发投入。高管团队教育背景异质性过大，会影响高管团队成员合作效率，影响研发决策效率，因此企业应增加高学历管理者，减少高管团队成员之间的教育背景异质性。

加强董事监督，帮助高管作出正确的战略决策。董事会能从企业发展的长远利益出发，监督高管的行为决策，特别是减少高管团队教育背景异质性对研发投入的负面影响。

参考文献

Alexiev, A. S., Jansen, J.J.P., Bosch, F.A.J.V.D., & Volberda, H.W.(2010). Top management team advice seeking and exploratory innovation: the moderating role of TMT heterogeneity. Journal of Management Studies, 47(7), 1343-1364.

Becker, M.H. (1970). Sociometric location and innovativeness: reformulation and extension of the diffusion model. American Sociological Review, 35(2), 267-282.

Berle A A, Means G C..(1932). The modern corporation and private property. New York: Commerce Clearing House.

Boyd, B.K., Haynes, K.T., & Zona, F.(2011). Dimensions of CEO–board relations. journal of management studies, 48(8), 1892-1923.

Chen, & Hsiang-Lan.(2014). Board capital, CEO power and r&d investment in electronics firms. Corporate Governance An International Review, 22(5), 422-436.

Desai, V.M. (2016). The behavioral theory of the (governed) firm: corporate board influences on organizations' responses to performance shortfalls. Academy of Management Journal, 59(3), 860-879.

Guldiken, O., & Darendeli, I.S. (2016). Too much of a good thing: board monitoring and R&D investments. Journal of Business Research, 69(8), 2931-2938.

He, W.F., & Liu, Q.L. (2010). Research on background characteristics and financial restatement behavior of Chinese listed company executives. Management World (7), 144-155.

Kang, Y.L., Huang, G.L., & Chen, K.J. (2011). The impact of senior management characteristics on R&D investment: an empirical analysis based on high-tech industries. Science and Technology Progress and Countermeasures (8), 147-151.

Li, T. (2014). Research on Open Innovation Strategy Based on the Characteristics of Senior Management Team. Special Economic Zone, 11(1), 103-126.

Li, X.Q., & Hu, Z.X.(2016). Research on the Impact of Cognitive Characteristics of Technology Start-ups' Board of Directors on the Dynamic Capabilities of Technological Innovation. Chinese Journal of Management, 013(002), 248-257.

Liu, B., Liu, J.X., & Li, Y.F. (2015). The relationship between senior management team heterogeneity and corporate performance: the moderating role of management autonomy. Science and Technology Management Research, 12(2), 154-160.

Liu, X.M., Sun, T.T., & Wu, S.J. (2017). Research on the relationship between the heterogeneity and innovation of the senior management team of Chinese equipment manufacturing enterprises. Technology and Innovation Management (3), 238-247.

Miller, T., & Triana, M.D.C. (2009). Demographic diversity in the boardroom: mediators of the board diversity-firm performance relationship. Journal of Management Studies, 46(5), 755-786.

Tan, J.S., Cao, H.J., Yi, Y., & Kong, X.T. (2017). Enterprise life cycle and board structure: the perspective of resource dependence theory. Accounting and Economic Research, 031(006), 3-24.

Wang, Y.N., & Song,T. (2013). Research on the Moderating Effect of Top Management Team Heterogeneity on R&D Investment and Corporate Performance. Modern Finance (Journal of Tianjin University of Finance and Economics) (9), 109-118.

Wincent, J. , Anokhin, S. , & Oertqvist, D. . (2010). Does network board capital matter? a study of innovative performance in strategic sme networks. Journal of Business Research, 63(3), 265-275.

Zhang, M.M., & Duan, H.Y. (2015). Research on the impact of senior management team characteristics on corporate R&D investment*--Taking GEM listed companies as an example. Friends of Accounting (3), 51-57.

Zhao, X.G., Wang, K.Y., & Sun, H.Y. (2012). Research on the lag effect of the impact of Chinese listed companies' R&D investment on corporate performance: An empirical analysis based on a two-way fixed effect model. Modern Management Science (8), 17-19.

Zhong, X., Song, T.B., Chen, W.H., & Weng, Y.M. (2019). The impact of board supervision on enterprise R&D investment: based on the moderating effect of supervision complexity. Research and Development Management, 31(01), 83-92.

高校餐饮社会化管理中存在的问题与对策
PROBLEMS AND COUNTERMEASURES IN THE OUTSOURCING SERVICE OF CATERING IN UNIVERSITIES

农冬梅
Dongmei Nong

正大管理学院
Panyapiwat Institute of Management
*Corresponding author: Dongmei Nong, E-mail:471329377@qq.com

摘要

随着高校招生规模的不断扩大，高校传统的餐饮模式已很难满足数量激增的大学生的饮食需求，更难为当代师生提供个性化的饮食服务。在高校试行餐饮业社会化管理，针对社会化改革过程中存在的问题，通过线上满意度的问卷调查、文献研究等方法进行原因探究，在此基础上提出切实可行的发展对策，以提高高校餐饮业的服务质量。

关键词：高校餐饮；社会化管理；问题；对策

Abstract

In the past planned economy system, the traditional catering mode of catering in colleges and universities has been difficult to meet the needs of the increasing number of college students, and it is even more difficult to provide personalized catering services for contemporary teachers and students. In order to improve the service quality of catering industry in colleges and universities, local colleges and universities try out the outsourcing service of catering industry. Aiming at the problems existing in the process of socialization reform, this paper explores the causes through online satisfaction questionnaire survey and literature research, and proposes feasible development countermeasures.

Keywords: Catering of colleges and universities, Socialized management, The problem countermeasures

引言

高校餐饮是关系着高校正常运行和保障师生日常需求的学校餐饮工作的关键环节，因而高校餐饮的服务质量在保障师生的饮食健康、促进高校的协调发展方面起着基础性的作用。在市场经济条件下，为解决高校扩招导致的学生数量激增和师生对餐饮的需求日益多样化的矛盾，提升高校餐饮业的管理、服务水平和工作效率，引入竞争机制的社会化管理模式是高校餐饮改革的重要方向。高校餐饮社会化管理是指将高校餐饮业管理中引入社会资源，发挥社会资源优化配置的作用，达到提高高校餐饮业的工作效率和服务水平的目的。本研究的思路是通过文献研究实地调研、问卷调查等方式了解高校传统的餐饮业管理模式的弊端，为引入社会化管理后的改革确定方向；通过了解改革初期和经营的状况，及时做出修正和完善措施，积极探索高校餐饮社会化管理的最优化路径。

1. 高校餐饮业社会化的必要性

高校是非营利性的机构，高校的餐饮业一直以来也是以非盈利、服务师生为主要目的。2002 年教育部颁布的《关于切实加强高等学校食堂管理工作的通知》中明确指出：“高等学校食堂的主要功能是为师生提供餐饮服务，具有明显的公益性”[1]。所以，一直以来高校对餐饮业实施贴补的管理措施，但近年来高校在校人数激增，现代高校师生对餐饮的需求日益多样化，传统的管理模式在一定程度上阻碍了高校发展的步伐，具体表现如下：

1.1 加剧高校资金短缺的困境

近年来，高校持续扩招，在校大学生数量剧增，增加了高校的财务压力。学校各方面的发展都离不开资金的支持，面临巨大财务赤字的高校其各方面的发展都会受到影响。作为可以创收的行业比如餐饮业如果还维持原来的非盈利、以服务为主的状态，继续补贴经营，将会加剧高校资金短缺的情况，不利于高校的稳健发展。因此，在高校餐饮服务中引入社会化管理的模式，吸引有实力的企业到高校发展业务，实行校企合作，对学校的创收工作将起到积极的推动作用。[2]

高校餐饮业实行社会化管理，引用社会上充足的资金，减轻了高校资金进一步投放到餐饮业上的财政压力，同时在不违背高校餐饮业公益性质的前提下，校企合作带来的效益还可以为高校的发展提供助力。

1.2 餐饮管理制度和应对措施不完善

原来非盈利为导向的高校餐饮服务模式由于缺乏竞争，加上学校封闭性的特点，餐饮管理制度落后且容易流于形式，监督管理缺乏科学和严格性。受传统思想观念的影响，认为高校餐饮业只要解决师生的饮食需求、没有安全事故就可以了，因此也不会积极去预见高校餐饮业中可能会出现的问题，应对措施基本都属于滞后型。而这种懒散、封闭的服务模式，也很难做到创新，难以提高服务质量。引入竞争机制的社会化管理，将会给高校餐饮业的发展注入一股活力。首先，企业在入驻高校以前已经形成了相对成熟的管理制度和各种突发问题的应对措施，入驻高校后只需根据高校餐饮的特点进一步完善即可，减少了摸索和尝试的环节；其次，社会化管理后的经营效益是分散的，每个企业只有在竞争中不断创新、优化服务、完善管理才能达到预期的效益，这一过程就逐步完善了高校餐饮的管理制度。

1.3 服务质量远达不到当代师生对餐饮的要求[3]

财务的压力、服务意识的局限使得高校对餐饮业的定位局限于能够为师生提供基本的饮食需求即可，对于丰富饮食品种、提高服务的质量以及为师生提供个性的服务这类问题根本无暇顾及。而现实矛盾却日益凸显，当代的大学生对饮食的要求却不再仅仅停留于温饱即可的阶段，他们是生活在我国经济水平日益提高、生活水平日益优渥环境下的一代人，不仅要求学校食堂提供的饮食做到基本的干净、卫生，也对菜品的种类、口感甚至视觉感受都提出了新的要求。此外，随着高校的扩招，高校的大学生也来自祖国的大江南北，饮食习惯差异很大，如果高校的食堂还是按照惯例和以往的工作经验仅提供本地区的菜品，对来自其他地区的大学生来讲吸引力不大。当代的师生除了对餐饮本身的要求发生了变化以外，就餐的环境也会有较高的要求，他们希望学校的餐厅环境优雅、大气，能够给他们的进餐带来赏心悦目的感受或者可以满足他们聚餐的目的。这些要求的改变，无疑为高校餐饮业的传统经营模式提出了挑战。由于资金、经营理念等问题，高校餐饮业的传统管理和经营模式在现实变化的应对中已力不从心。

高校的餐饮业实行社会化管理同时也引入了竞争机制。为了获得更好的收益，企业必须在饭菜品种、服务质量和服务态度、餐厅环境等因素上努力改进。只有师生满意度高的企业才能得到更好的发展。社会化管理后的高校餐饮业有了较多的精力和动力关注师生的饮食需要，为满足师生的饮食需要及时改变服务的内容。

1.4 学校周边餐饮业对学校师生的饮食健康构成了不确定性的影响。

高校餐厅服务质量提升的滞后性直接给学校周边餐饮业的兴起提供了便利的条件。校外的餐饮在种类、口味、服务态度等方面给高校师生提供了更大空间的选择性，但是校外商家采用的原材料的质量不在高校的监管范围内，存在较大安全、卫生隐患。据调查，几乎所有的大学生都有在校外周边门店或摊点就餐的经历。这种现实不仅使得大量资源外流，造成了学校食品的浪费，也为大学师生的健康带来不确定的影响。食材质量对高校师生健康的影响是长久的，也会高校的正常和稳定性，如何与校外餐饮服务竞争，也是高校务必要考虑的问题。

由于高校餐饮公益性质的特殊性校餐饮业实行社会化管理后服务的质量仍然归高校监管。学校有责任、权力监督企业原材料的选用、菜品的质量、价格、卫生等状况，并在经营之初以合约的形式固定下来，从而保证师生的权益。

研究目的

本研究将调查、了解高校传统的餐饮业管理模式的弊端，为引入社会化管理后的改革确定方向；通过了解改革初期和经营的状况，及时做出修正和完善措施，积极探索高校餐饮社会化管理的最优化路径。

文献综述

车鹏提到高校餐饮服务的特点是为具有很强稳定性、规模较大的特殊群体提供以公益性为主的服务。并以陕西三所大学食堂社会化的效果分析做抓手，进行了实证调查[1]；衣维忠(2019)从高校食堂个体经营和自主经营管理上存在的弊端进行分析，探讨了高校食堂社会化经营模式[2]；张平(2016)结合平衡计分卡，从大学生食堂绩效评价指标体系的构建入手，以西北民族大学生大众食堂和清真食堂经营对比，从师生、食堂经营者、食堂从业者进行调查分析，从经营者的财务层面、顾客层面、内部层面、员工学习成长层面探讨了大学食堂社会化管理绩效评价体系的可行性[3]；史达(2019)从高校规模的扩大需求导致食堂餐饮业的变革，从存在扩招与服务质量、服务公益性与服务高质量等问题中探讨高校餐饮管理社会化改革的发展对策[4]。高向荣、曹磊从顾客满意方面着手对高校食堂的经营进行里相关的探讨[5,6]。

从相关的文献中，我们可以看到研讨者对餐饮的探究离不开顾客满意度的探讨，提升服务质量，获取顾客满意度已经成为餐饮业经营者经营成功的一个重要因素。高校原有的食堂经营模式已经远远不能满足社会发展，高校发展的需求。

研究方法

本研究的方法是通过文献研究、实地调研和问卷调查等方式来研究高校传统的餐饮业管理模式的弊端。

研究结果

5. 高校餐饮社会化管理试行中存在的问题

高校餐饮业实行社会化管理后，学校食堂管理成本和管理负担有所降低，食堂服务态度及菜品质量不断提升，管理机制也初步建立。从改革效果来看高校餐饮社会化特别是餐饮行业的社会化管理在一定程度上缓解了现实的矛盾，提高了工作效率，取得了一定的效益。但在改革之初也存着诸多的问题亟待解决。通过对四所高校的 917 名师生的问卷调查、和对 BS 学院食堂经营者的访谈和实地调研，发现目前高校餐饮社会化管理中存在的问题大致有以下几类：

5.1 服务质量需要加强统一要求与监管。

高校的餐饮业实行服务社会化管理后，需要引进社会资源，而社会资源持有者的经营理念和服务意识差异甚大[4]。在岗位竞争时经营者的理念不能充分暴露，甚至可以被掩饰，实际经营时由于利益的驱使，部分经营者的履约情况不容乐观。高校餐饮实行社会化管理，虽然变革了餐厅的运营机制，但高校要为师生的健康和学校的发展负责，其承担的管理与监督的权力与义务不能因此发生改变。高校准入的餐饮经营人员在财务实力、经营理念及服务质量上的参差不齐，对高校的统一监管提出了挑战。本研究对学校对外承包后的餐饮运营情况和承包时签署的合同书进行对比，发现有相当数量的餐厅营业人员未能在后厨卫生、饭菜价格和工作业务要求方面很好履行约定。食堂经营人员习惯于沿用以往在社会上经营的模式在高校开展食堂服务，他们的工作具有一定的独特性，一时难以达到统一的要求和标准。

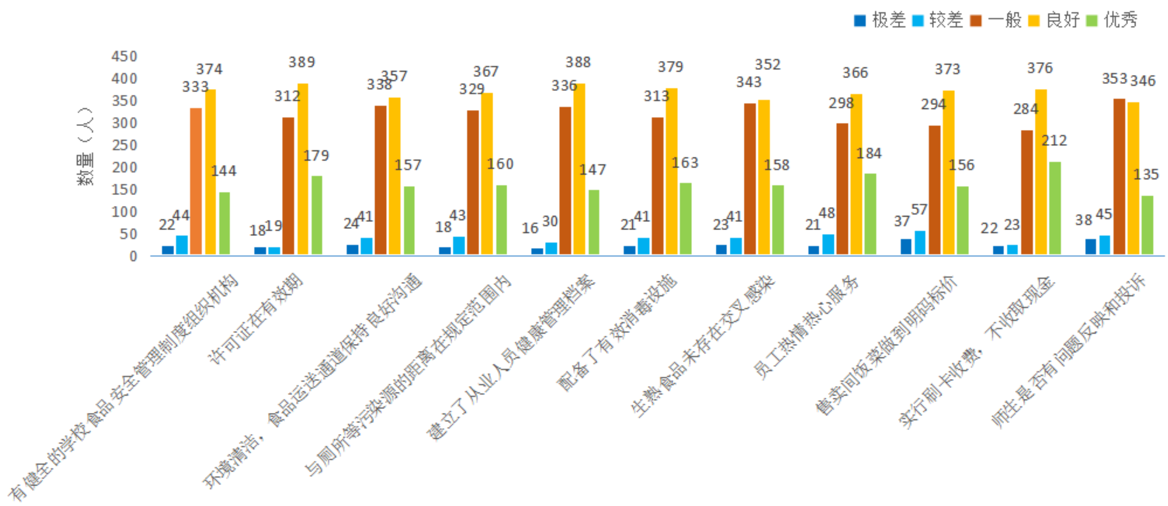


图 1: 高校师生对高校食堂各方面满意度评价

如图 1 所示，以四所高校的 917 名师生对高校食堂的各方面进行了评价，其中涵盖了食堂的食品安全管理制度、经营许可证的有效期、员工的服务态度、饭菜价格的明码标价、刷卡收费等内容。对高校食堂各方面评价良好的人数为 312-389 之间，评价为一般的人数为 284-353 之间，评价为优秀的人数为 135-212 之间，评价为较差的人数为 19-59 之间，评价为极差的人数为 16-38 之间。

从整体上看，高校师生对于食堂各方面的满意度评价较为良好，但仍存有部分师生对所在的高校食堂不满意，在处理师生反映的问题方面的评价为极差的人数最多（38人），其次是饭菜的明码标价问题（37 人差评）、员工服务态度（21 人差评）、餐具消毒问题（21 人差评）、环境清洁度（18 人差评）等。由此可见高校食堂在各方面的管理还有待提升。

5.2 社会化管理后服务人员素质未显著提高

与采用社会化管理模式前相比，高校餐饮业服务人员的素质并未有明显提升。相反，高校餐饮业进入社会化管理后，服务人员的安排不再受高校的监管。为了节约成本，餐饮经营人员一般会聘用业务素质相对不高的临时工，而且聘用数量也严格把控。服务人员流动性大、人员数量与劳动量比例不协调，导致食堂服务出现一人多岗的局面，增加了岗位培训的难度，难以实现服务专业化、机制化。本研究调查了 BS 学院 115 名食堂员工的年龄、岗位情况、工作时间以及岗前培训的经历，发现食堂雇佣的员工平均年龄在 40 岁以上，高校餐饮的大规模性、集中性对这些中老年的体力造成了一种挑战。除了后厨人员，大部分员工入职前相关工作经历匮乏，食堂的业务培训工作也是需要提上日程。对员工的培训在一定程度上增加了餐厅的运转成本，削弱了餐厅的盈利。

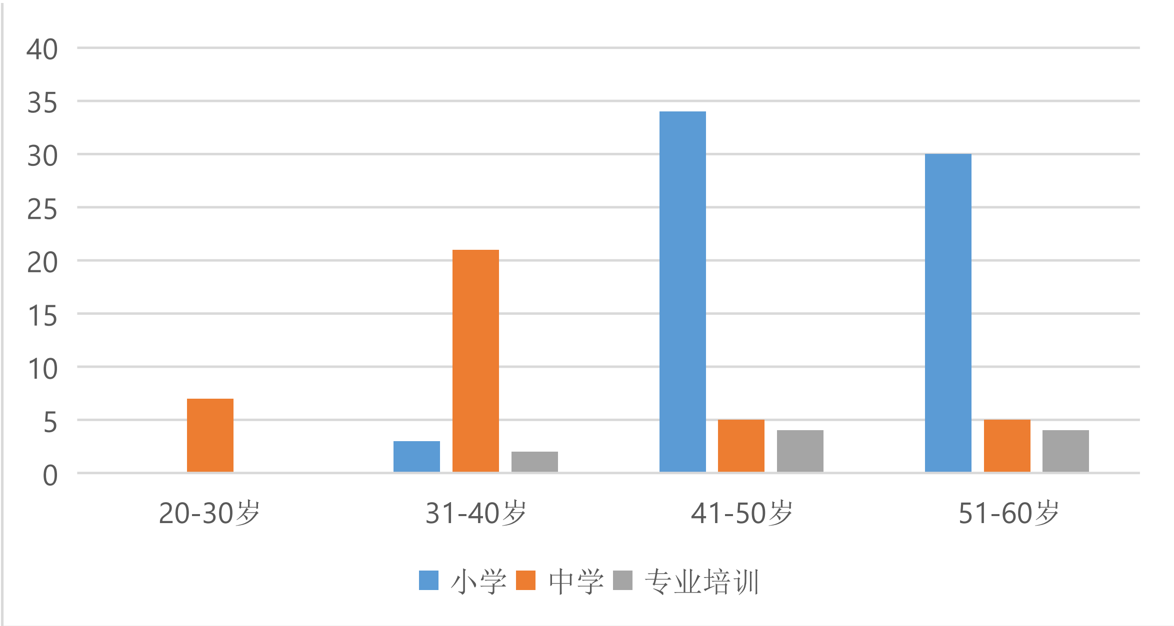


图 2: 食堂员工培训年龄分布图

5.3 诚信意识淡薄，负面影响不容忽视

高校餐饮业引入的社会资源一方面要解决高校目前面临的现实问题，另一方面也要满足社会企业想要盈利的目的。为了盈利最大化一些餐厅经营人或者员工忽略了高校餐饮的公益性质，在原材料上质量上把关不严、数量上偷工减料，导致师生满意度低，让学校在是师生心目中的形象大打折扣。

另一方面，餐厅的基础设施是有学校投资建设的，不需要经营人投资，餐厅工作人员在日常经营中对一些基础设施做不到爱护和维护，合同期满很多基础设施已破坏不堪，增加了学校对餐厅基础设施投资的负担。

5.4 由于服务成本增加导致的价格上涨。

除了饭菜的质量，高校师生最关心的问题就是饭菜的价格了。在对高校餐饮社会化管理的满意度调查中，研究者得到最多的反馈就是食堂饭菜的价格高过校园附近流动个体经营的同类产品。饭菜价格的上涨与社会化管理后服务成本的增加以及企业的盈利需求有关，这在一定程度上对高校餐饮业的公益性质造成了威胁。

现实问题是在相对自由的情况下，明显的价格差会导致一部分大学生到校外就餐，使得学校餐厅出现顾客粘合度尚可和满意度低靡的情况。通过调查发现，学校社会化管理后的餐饮业比改革之前学生的粘合度有所提升，但是还没有到达理想的状态，处于市区的校外餐饮业和外卖点餐业务仍然冲击了相当一部分的高校食堂的服务。调查结果显示，89%的同学会选择经常在学校食堂就餐，因为课业繁重在食堂就餐是最快捷的方式；有 7%的同学选择经常在校外就餐，3%的同学会选择点外卖或者泡面的方式。

5.5 餐厅功能单一，基础设施未能充分利用

高校的餐厅与普通的餐饮单位相比还可以具有一定的育人功能，比如针对大学校园里的食物浪费现象，餐厅可以举办相应的活动杜绝浪费。但目前为止调查到的信息显示，高校的餐厅除了发挥基本的提供餐饮功能之外，并未涉及其他功能来丰富校园文化活动，弘扬饮食文化。此外，高校的餐厅面积较大、设施较全，但是学生要举行聚餐、联谊等活动却要到校外寻找场地，未能充分利用高校餐饮业的场地和功能。

总结

本研究通过结合对四所高校 917 名师生进行的对高校食堂满意度的问卷调查和对 BS 学院 115 名餐饮服务人员的年龄、岗位情况、工作时间以及岗前培训的调查，得出餐饮服务人员年龄结构不合理、知识层次、服务态度影响了师生用餐满意度的结论。本研究认为必要的餐饮社会化管理是提高服务质量、最大可能使高校食堂服务达到师生期望值的关键对策。

讨论

7. 高校餐饮社会化管理的对策

针对调查中发现的问题，根据高校的实际情况和师生对高校餐厅的期望，提出以下完善措施：

7.1 完善餐饮社会化的准入条件和监管制度。

高校餐饮业对外招标时要通过社会调研的方式加强对竞标者的社会信誉、经营理念和企业文化等指标的严格审核，防止唯利是图、管理不规范的企业进入校园。同时采用公开、公正的竞标方式，杜绝人情招标。在运营过程中不定期地对餐饮业的服务质量进行标准弹性统一的抽查或者考核，及早发现问题，并及时进行针对性的整改。对不服从管理者或者考核规定次数以上不达标的企业尽早旅行解约的程序。学校与企业之间的合作合同期限不宜太长，随时储备合适纳入学校餐饮系统的企业参与招标竞争，只有平时管理规范、服务质量良好、讲诚信的企业才可以参与下次的招标活动。从源头上保证了准入企业的质量可以在经营过程中减少负面问题的发生。

7.2 定期对餐饮服务人员进行业务培训。

针对部分企业工作人员招聘程序的不规范化，高校应该组织定期组织餐饮业员工进行业务培训。高校的餐饮业相对于社会市场而言有相对充裕的培训时间，利充用好工作量不大的节假日进行培训培训对提升员工的业务水平会有较大的裨益。高校也可以在餐饮运营期间请经验丰富的餐饮业同行到学校进行参观指导，及时吸收先进的经营和管理理念。因为与师生直接打交道的是餐厅工作人员，定期他们进行业务培训，增加员工对工作的熟悉度、提升服务意识，有利于学校基础设施的维护，也有助于在师生心目中树立学校良好的形象。

针对餐饮工作人员的流动性大的现状，高校应该要求企业经营人严格按照《中华人民共和国劳动法》的规定，规范用工制度，保障工人的权益 [1]。同时，高校可以建立内部用工档案，将餐厅工作人员纳入学校考核管理[5]，保障食堂从业人员享有同学校教职工同样的奖励和福利待遇，激发他们的主人公意识和自豪感。

7.3 统一实行电子交易，监管价格起伏。

符合准入条件的企业要和高校签署履约承诺书，把企业在高校经营业务需要遵循的条例以合约的形式固定下来。比如关于交易形式的限制，条文中应明确规定高校的餐饮应以电子交易的形式进行，不得使用现金交易，这是餐饮社会化后高校必须实施的监管措施。实行电子交易方便学校对餐饮业收费状况进行监管，掌握实时的餐饮价格以及学生的消费规律，防止不符合市场规律的抬价行为。

7.4 统一供应原材料，保证餐饮质量。

防止抬价行为的发生还可以通过统一供应餐饮原材料来实现。蔬菜供应商也可以通过公平竞标的方式进入校园，是高校餐饮业社会化链条上的重要一环。统一采购原材料的形式，既可以保证原材料质量，还可以使餐饮成本计算到最低。同时可以有效防止餐饮业老板因为零散采购原材料导致的成本不透明，从而为遏制随意调整菜品价格提供了助力。

7.5 举办校园美食活动，营造餐饮文化氛围

高校餐厅除了承担基本的餐饮服务，还可以联合学校主管部门、校外餐饮单位或者学生团体举办丰富多彩的餐饮活动，吸引师生参与到活动中来，既可以扩大宣传又可以实现高校餐厅育人的特殊属性。比如举办校园美食文化节、地方特色美食展、校园厨神比赛等，既丰富了高校师生的高校生活、愉悦身心、增长了师生对饮食文化的了解，也可以扩大宣传，充分利用学校餐厅的基础设施，提高师生对餐厅服务的满意度。

参考文献：

[1] 车鹏 (2019).高等学校餐饮服务外包实践效果及改进对策研究——以陕西 3 所高校为例.西北大学，1-63.

[2] 衣维忠 (2019).关于高校食堂经营模式和管理的探析.经济研究导刊,12 期,188-189

[3] 张平，陈长静(2016).高校餐饮社会化管理绩效评价体系及实证分析.企业技术开发,15 期,119-121

[4] 史达(2019).高校餐饮管理社会化改革中存在的问题与对策.科技风，19 期，208

[5] 陈章荣（2010）.高职院校食堂社会化管理存在的问题与对策研究.科技创新导报，第 11 期,185-187

[6]曹磊(2013) .云南中医学院学生试探管理创新的思路、方法和途径研究——基于学生食堂满意度的实证分析.昆明理工大学,1-68
[7]高向荣(2011).高校食堂顾客满意度研究——以南昌高校食堂为例 .江西农业大学，1-64

附录 1

您好！我目前正在进行一项关于高校餐饮社会化服务质量的调查，想邀请您花费几分钟时间帮忙填写这份问卷。本问卷题目的选项没有对错之分，所有调查数据仅用于学术研究，请您根据您的真实情况填写，感谢您的参与和对我的大力支持！

第一部分 基本信息统计

1. 您的性别：A 男 B 女
2. 您的年龄：A 18~25 B 26~30 C 31~40 D 41~50 E 51 及以上
3. 您的受教育程度：A 专科及以下 B 本科 C 硕士生及以上
4. 您的学校类型：A 高职院校 B 专科学校 C 本科院校 D 综合院校（本科＋研究生）
5. 您的职业：A 学生 B 专任教师 C 行政管理人员　D 餐饮工作人员

第二部分 餐饮社会化服务质量的满意情况

请根据您的想法，回答您对目前本校餐饮社会化服务质量的满意情况，在您觉得合适的数值上打“√

评价内容	您对服务的感受				
	很不满意	不满意	一般	满意	很满意
1.餐饮设施设备齐全便捷					
2.餐饮设施具有一定规划设计，有感官吸引					
3.餐饮工作人员穿着得体干净，有较好的职业素养					
4.食堂的设施与所提供的服务类型匹配适宜					
5.餐饮设备运行正常，定期进行设备维护与技术升级					
6.餐饮管理能够及时地完成承诺的服务内容					
7.当师生遇到餐饮服务范围内的困难时，餐饮工作人员能表现出同情并提供帮助					
8.餐饮管理的服务正式规范，有明确的规章制度考核和约束餐饮服务的行为					

评价内容	您对服务的感受				
	很不满意	不满意	一般	满意	很满意
9.食堂管理能在约定时间内，准时地提供所承诺的服务内容					
10.食堂能够正确地保存相关记录					
11.食堂会告之提供服务的准确时间					
12. 能得到餐厅工作人员提供的及时服务					
13. 餐厅工作人员乐于帮助学校师生，出现矛盾和问题能耐心细致向师生解答。					
14. 餐厅工作人员不会因为忙碌，而忽略提供及时服务					
15. 餐厅工作人员业务熟练，对待师生遇到的问题有耐心和爱心。					
16. 在和餐饮工作人员打交道时感到放心					
17. 餐厅工作人员行为端正礼貌，热情为师生服务，积极主动与师生沟通打招呼					
18. 餐厅工作人员可以从餐饮处获得足够的支持和培训的机会，以很好地完成他们的工作					
19. 食堂能够针对性地提供个性化服务					
20. 餐厅工作人员对特殊需要的学校师生给予个别关心					
21. 餐厅能够理解及满足学校师生需求					
22. 餐厅坚持“以人为本”的理念，把学校师生的最佳利益放在首位					
23. 餐饮提供的服务时间符合学校师生需要					

附录 2

您好！我目前正在进行一项关于高校餐饮社会化服务质量的调查，想邀请您花费几分钟时间帮忙填写这份问卷。本问卷题目的选项没有对错之分，所有调查数据仅用于学术研究，请您根据您的真实情况填写，感谢您的参与和对我的大力支持!

第一部分: 个人信息

第 1: 题 您的性别:

选项	小计	比例
男	256	27.92%
女	661	72.08%
本题有效填写人次	917	

第 2: 题 您的职务

选项	小计	比例
学校领导及监管人员	8	0.87%
餐饮负责人	0	0%
餐厅工作人员	10	1.09%
学生	899	98.04%
本题有效填写人次	917	

第二部分： 高校餐饮业社会化评价：请您根据自己的实际体会对所在餐饮行业的达标度进行评价。

第 3: 题 请根据您的实际体会对所在餐饮行业食品安全管理方面的达标程度选择最符合的项:

题目\选项	极差	较差	一般	良好	优秀
有健全的学校食品安全管理制度组织机构	22(2.4%)	44(4.8%)	333(36.31%)	374(40.79%)	144(15.7%)

第 4: 题 请根据您的实际体会对所在餐饮行业许可情况方面的达标度选择最符合的项：1-->5 表示极差-->优秀

题目\选项	极差	较差	一般	良好	优秀
许可证在有效期	18(1.96%)	19(2.07%)	312(34.02%)	389(42.42%)	179(19.52%)

第 5: 题 请根据您的实际情况对所在餐饮行业食堂环境方面的达标度选择最符合的项：1-->5 表示极差-->优秀

题目\选项	极差	较差	一般	良好	优秀
环境清洁，食品运送通道保持良好沟通	24(2.62%)	41(4.47%)	338(36.86%)	357(38.93%)	157(17.12%)

第 6: 题 请根据您的实际情况对所在餐饮行业食堂与厕所等污染源的距离在规定范围内的达标度选择最符合的项：1-->5 表示极差-->优秀

题目\选项	极差	较差	一般	良好	优秀
与厕所等污染源的距离在规定范围内	18(1.96%)	43(4.69%)	329(35.88%)	367(40.02%)	160(17.45%)

第 7: 题 请根据您的实际情况对所在餐饮行业健康管理及培训方面的达标度选择最符合的项：1-->5 极差-->优秀

题目\选项	极差	较差	一般	良好	优秀
建立了从业人员健康管理档案	16(1.74%)	30(3.27%)	336(36.64%)	388(42.31%)	147(16.03%)

第 8: 题 请根据您的实际情况对餐饮行业清洗消毒方面选择最符合的项：1-->5 极差-->优秀

题目\选项	极差	较差	一般	良好	优秀
配备了有效消毒设施	21(2.29%)	41(4.47%)	313(34.13%)	379(41.33%)	163(17.78%)

第 9: 题 请根据您的实际情况对所在的餐饮行业食品加工制作方面选择最符合的项：1-->5 表示极差-->优秀

题目\选项	**极差**	较差	**一般**	**良好**	优秀
生熟食品未存在交叉感染	23(2.51%)	41(4.47%)	343(37.4%)	352(38.39%)	158(17.23%)

第 10: 题 请根据您的实际情况对所在的餐饮行业服务态度方面选择最符合的项：1-->5 极差-->优秀

题目\选项	**极差**	较差	**一般**	**良好**	优秀
员工热情热**心服**务	21(2.29%)	48(5.23%)	298(32.5%)	366(39.91%)	184(20.07%)

第 11: 题 请根据您的实际情况对所在的餐饮行业食品售卖间饭菜做到明码标价方面选择最符合的项：1-->5 极差-->优秀

题目\选项	**极差**	较差	**一般**	**良好**	优秀
售卖间饭菜**做到明**码标**价**	37(4.03%)	57(6.22%)	294(32.06%)	373(40.68%)	156(17.01%)

第 12: 题 请根据您的实际情况对所在的餐饮行业食品价格实行刷卡收费，不收取现金方面选择最符合的项：1-->5 极差-->优秀

题目\选项	**极差**	较差	**一般**	**良好**	优秀
实行刷卡收费，**不收取**现金	22(2.4%)	23(2.51%)	284(30.97%)	376(41%)	212(23.12%)

第 13: 题 请根据您的实际情况对所在的餐饮行业满意度方面选择最符合的项：1-->5 极差-->优秀

题目\选项	**极差**	较差	**一般**	**良好**	优秀
师生是否有问题反映和**投**诉	38(4.14%)	45(4.91%)	353(38.5%)	346(37.73%)	135(14.72%)

贵州省高职类教师人格特质对教学效能的影响：情绪调节的中介作用

THE IMPACT OF PERSONALITY TRAITS OF HIGHER VOCATIONAL TEACHERS ON TEACHING EFFICIENCY IN GUIZHOU PROVINCE: TAKING EMOTION REGULATION AS A MEDIATOR

吴祖丹
ZUDAN WU
PIM

泰国正大管理学院
1006176193@qq.com

摘要

本研究以贵州省高职类教师为研究对象，探讨贵州省高职类教师人格特质对教学效 能的影响，用方便抽样方式选取了8所高职类院校的793名教师进行问卷调查。研究结果表明：贵州省高职类教师人格特质处于中等偏上水平，情绪调节处于中等偏上水平， 教学效能处于中等水平，人格特质、情绪调节、教学效能呈显著正相关，情绪调节在人格特质与教学效能之间存在部分中介作用。

关键词:高职类教师；人格特质；情绪调节；教学效能

Abstract

This study takes the higher vocational teachers in Guizhou Province as the research object, discusses the influence of the personality traits of the higher vocational teachers in Guizhou Province on the teaching efficiency, and selects 793 teachers from 8 higher vocational colleges to conduct a questionnaire survey using a convenient sampling method. The research results show that the personality traits of teachers in higher vocational colleges in Guizhou Province are at the upper-middle level, the emotional regulation is at the upper-middle level, the teaching effectiveness is at the middle level, and the personality traits, emotion regulation, and teaching effectiveness are significantly positively correlated, and the emotion regulation is in the personality traits. There is a partial mediating effect between teaching effectiveness.

Keywords: Higher Vocational Teachers, Personality Traits, Emotion Regulation, Teaching Efficiency

一、引言

教育均衡发展是实现教育公平的重要举措，高职教育的均衡发展是实现高职教育公 平、促进高职教育全面、协调和可持续发展的重要举措。贵州省是中国一个西部省份， 因为没有平原，导致了其在城镇化和工业化发展受限，因此，这些因素对高职技术人才 的培养存在一定程度的影响，也制约着中国高职教育的区域均衡发展。《贵州省中长期教育改革和发展规划纲要（2010-2020 年)》提到，“富民兴黔，教育为本”，指明了教育 优先发展重要性地位。贵州省现有高职类院校 32

所，无法满足大多数人对职业教育渴望，也由于很多客观因素的制约，高职院校目前的发展状况仍不能完全满足贵州的经济 发展需求，优质师资短缺、办学条件落后等因素导致了高职院校普遍存在教学质量难以保障（何国伟，2016）。

为所有人提供优质高职教育是实现高职教育区域均衡发展主要体现目标之一（张小军，2015）。优质高职教育实则为良好的教学质量，教师教学行为的效果作为影响教育质量的主要因素，教师效能也因此逐渐受到广大学者的关注。提高办学水平促进中国高职教育区域均衡发展的重要因素之一，教学教育质量是提升高校办学水平的核心，而教学效能是影响教学质量重要影响因素。因此，可以从教师的教学效能作为促进中国高职教育区域均衡发展的切入点，通过提升教师的教学效能，从而提升高职类院校的教育质量和办学水平。

二、文献综述

教师是教学中不可或缺的重要主体之一，在过程中发挥着重要作用，其对学生各个方面的发展都起到引导作用（吴国来、沃建中，2006）。教学效能是教师在教学中对自 己能够很好地完成教学任务、目标的能力认知和信心，对教师的教学态度、教学投入、教学管理、教学策略、教学改革，以及对学生学习的投入、动机、兴趣等方面有着重要 影响作用。高校教师的教学效能感是指教师本人对自己教学能力的主观判断（张洁， 2019），相对教学效能感弱的教师，教学效能感强的教师的工作热情和工作兴趣会较强，也会愿意在教育事业中投入更多精力，从而取得很多工作成效（林崇德，2002）。教师 教学效能水平会影响学生对教师教学能力的感知，教学效能可以预测学生的学习成就， 教学效能高的教师对学生及学生的观点与建议的接纳性会更强，有助于学生的学习动机和学习成绩的提升（Miller, Ramirez, & Murdock, 2017）。相反，低教学效能的教师不利 于学生学习动机和学习成绩的提高。因此，应高度重视教学效能在学生发展和教师个人 发展中可发挥的作用。

人格是个体自身具备的一种稳定性格（Eysenck, 1970），教师的人格与教学效能感存在显著正相关的关系（李红卫，2009），教师具备着以人格培育人格、以灵魂塑造灵魂的职责，其职业特殊性决定了教师人格的重要性。一个合格的教师应该拥有良好、适合从事教育事业的人格特质（胡维芳，2019）。教师的个性或性格虽然是已经形成的比较稳定的心理因素，但也会影响教学情绪调节、教学状态，以及学生的学习态度和学习效果（陆静萍，2013），在教学过程中，如果把自己的情绪直接表现在课堂上，不仅会降低自己的教学效果和情绪管理能力，也会影响自己的身心健康发展（魏娴，2019）。

教师在教学过程中就是要"授业"和"解惑"，要时常与家庭、学校、社会打交道，自然会面临很多方面的压力，此次难免会出现消极情绪，此时，情绪调节的掌控决定着 教师是否可以避免这些消极情绪带来的负面影响。情绪调节是指个人为了实现目标，评

估或者更正正在产生的情绪反应（Thompson, 1994）。在个人情绪调节发生的时候，个人思考如何对情绪体验与情绪表现加以调节的方式（Gross, 1998）。高校教师作为高等

教育教学的主要参与者，不仅要具备良好的教学素养，还要具备情绪调节能力（秦丽娜、张建龙、丁英、赵蔚，2017）。因此，教师要注重对自身情绪的管理，合理管控自身的良好情绪，对自身不良情绪及时进行情绪调节，只有这样才能于学生进行有效沟通交流， 才能用最优良的状态从事教学活动，达到教学效能的最大化。

综上所述，高职类教师人格特质与情绪调节对教学效能感起着重要作用，直接影响 教育质量的高低，间接影响学校的办学水平和地区高职教育的平衡发展。关注教师人格 特质、情绪调节与教学效三者之间关系的研究，有助于高职类教师和学生的共同成长。高职教育与普通高

等教育中同样重要，是不可或缺的一部分，因此，高职类教师在思考 如何与学生沟通交往、如何提高学生成绩的同时，也应该关注自己、了解自己，有意识 地塑造个人良好人格，合理掌握自身的情绪调节，从而提升自身教学效能。

因此，本研究文献综述部分各变量的相关研究，以人格特质为自变量，以教学效能为因变量，以情绪调节为中介变量，根据研究模型，提出以下研究假设：

H1：贵州省高职类教师人格特质对情绪调节存在显著预测作用 H2：贵州省高职类教师人格特质对教学效能存在显著预测作用 H3：贵州省高职类教师情绪调节对教学效能存在显著预测作用 H4：贵州省高职类教师情绪调节在人格特质与教学效能之间存在中介作用

三、研究设计

1. 研究框架

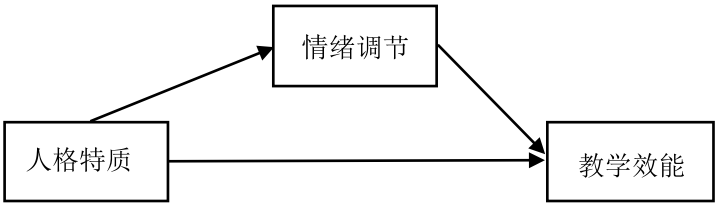


图-1 研究框架图

2. 研究对象

本研究以方便抽样方式选取了中国贵州省8 所高职类教师作为研究对象并进行问卷调查，实际收集了问卷 894 份，剔除无效问卷 101 份，有效问卷 793 份，有效问卷占比88.7%。研究对象的人口统计学特征如表-1 所示。

表-1 研究问卷有效样本基本资料表（*N*=793）

统计变量	类别	样本数	百分百比（%）
性别	男	458	57.8
	女	335	42.2
教龄	5 年及以下	474	59.8
	6 至 10 年	77	9.7
	11 至 15 年	84	10.6
	15 年及以上	158	19.9
学历	大专	622	78.4
	本科	78	9.8
	硕士研究生	43	5.4
	博士研究生	50	6.3

3. 研究工具

3.1 人格特质量表

本研究采用王孟成、戴晓阳、姚树桥（2011）修订的“大五人格量表”（王孟成、戴晓阳、姚树桥，2011）。量表分为神经质、严谨性、宜人性、开放性、外倾性五个维度，共 40 道题目，采用Likert 6 点计分。量表Cronbach's α 值为0.897，删除因素载荷量低于0.5 的题项后，其余各题项因素载荷量在0.530-0.867 之间，均在0.5 以上，总方差解释率为64.63%，表明量表具有良好的信效度。

3.2 情绪调节量表

本研究采用王力、柳恒超、李中权、杜卫（2007）编制的情绪调节量表，量表分为认知重评、表达抑制两个维度，共14 个题项，采用Likert 6 点计分。量表Cronbach's α 值为0.929，各题项因素载荷量在 0.561-0.857 之间，均在 0.5 以上，总方差解释率为64.53%，表明量表具有良好的信效度。

3.3 教学效能量表

本研究采用俞国良、辛涛、申继亮（1995）编制的教师效能量表，由个人教学效能感、一般教育效能感两个维度构成，采用 Likert 6 点计分。量表 Cronbach's α 值为0.905，各题项因素载荷量在 0.505-0.857 之间，均在 0.5 以上，总方差解释率为 78.68%，表明量表具有良好的信效度。

3.4 数据处理

本研究使用 SPSS 24.0 和AMOS 21.0 进行数据处理和统计分析，主要包括描述性统计分析、相关分析，用AMOS 进行模型检验，中介效应显著性用非参数百分位Bootstrap 进行检验。

四、数据分析结果

4.1 贵州省高职类教师人格特质、情绪调节、教学效能描述性统计分析

本研究对贵州省高职类教师人格特质、情绪调节、教学效能进行描述性统计分析， 如表2 所示，人格特质的项目均分为4.008 分，高于理论中值，说明贵州省高职类教师人格特质处于中等偏上水平；情绪调节的项目均分为 4.117 分，高于理论中值，说明贵州省高职类教师情绪调节处于中等偏上水平；教学效能的项目均分为 3.758 分，处于理论中值之间，说明贵州省高职类教师情绪调节处于中等水平。各检测变量偏态系数均小于3、峰度系数均小于10，标明心理资本、创业意向均服从正态分布。

表-2 贵州省高职类教师人格特质、情绪调节、教学效能描述性统计分析表

检测变量	*M*	*SD*	偏态	峰度
人格特质	4.008	0.586	.462	.998
情绪调节	4.117	0.830	.095	.772
教学效能	3.758	0.688	.972	1.961

4.2 各变量在人口统计学变量上的差异分析

为了解不同性别、教龄、学历在贵州省高职类教师人格特质、情绪调节、教学效能的差异情形，本研究采用独立样本 t 检定及单因素（ANOWA）分析。由表-3 可知，不同性别在人格特质（t=2.292，p<.05）、情绪调节（t=3.338，p<.01）、教学效能（t=4.269，p<.001）均存在显著差异，其中男性教师在人格特质、情绪调节、教学效能的得分均高于女性教师。

表-3 不同性别在不同变量的差异分析表

检测变量	性别				*t*	*p*
	男（458）		女（335）			
	M	*SD*	*M*	*SD*		
人格特质	5.509	0.884	5.376	0.751	2.292*	.022
情绪调节	4.199	0.885	4.006	0.736	3.338**	.001
教学效能	3.843	.743	3.641	.584	4.269***	.000

注：***$p<.001$，**$p<.01$

由表-4 可知，不同教龄在人格特质（F=.269，p>.05）、情绪调节（F=.077，p>.05）、教学效能（F=1.678，p>.05）均不存在显著差异。

表-4 不同教龄在不同变量的差异分析表

检测变量	教龄								*F*	*p*
	5 年及以下		6 至 10 年		11 至 15 年		15 年以上			
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*		
人格特质	5.446	0.847	5.414	0.773	5.435	0.720	5.502	0.877	.269	.848
情绪调节	4.107	0.848	4.149	0.773	4.133	0.670	4.125	0.886	.077	.972
教学效能	3.731	.710	3.790	.580	3.691	.508	3.857	.743	1.678	.170

由表-5 可知，不同学历在人格特质（F=.345，p>.05）、情绪调节（F=.759，p>.05）、教学效能（F=1.665，p>.05）均不存在显著差异。

表-5 不同学历在不同变量的差异分析表

检测变量	学历								*F*	*p*
	大专		本科		硕士研究生		博士研究生			
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*		
人格特质	3.999	0.610	4.042	0.527	4.085	0.674	4.001	0.734	.345	.793
情绪调节	4.100	0.828	4.160	0.850	4.287	0.786	4.119	0.876	.759	.517
教学效能	3.742	0.700	3.765	0.587	3.724	0.574	3.965	0.741	1.665	.173

4.3 人格特质、情绪调节、教学效能相关分析

本研究采用 Pearson 相关分析，对贵州省高职类教师人格特质、情绪调节、教学效能各维度进行相关性检验。由表-6 可知，神经质与认知重评、一般教学效能感呈显著正相关，与表达抑制、个人教学效能感无显著相关；严谨性与认知重评、表达抑制、个人教学效能感呈显著正相关，与一般教学效能无显著相关；宜人性与认知重评、表达抑制、个人教学效能感显著正相关，与一般教学效能呈显著负相关；开放性与认知重评、表达抑制、个人教学效能感、一般教学效能显著正相关；外倾性与认知重评、表达抑制、个人教学效能感、一般教学效能显著正相关。

表-6 人格特质、情绪调节、教学效能各维度相关分析表

检测变量	1	2	3	4	5	6	7	8	9
1 神经质	1								
2 严谨性	.115***	1							
3 宜人性	.201***	.474***	1						
4 开放性	.019	.635***	.444***	1					
5 外倾性	.016	.499***	.374***	.667***	1				
6 认知重评	.231***	.348***	.156***	.473***	.423***	1			
7 表达抑制	.061	.532***	.348***	.611***	.514***	.679***	1		
8 个人教学效能感	-.054	.610***	.497***	.624***	.603***	.431***	.641***	1	
9 一般教育效能感	.378***	-.013	-.197***	.198**	.209***	.297***	.104**	.192**	1

注：***p<.001；**p<.05

4.4 情绪调节的中介效应分析

为了进一步考察情绪调节在人格特质和教学效能之间的关系，研究根据前文理论假设，本研究使用 AMOS 22.0 版软件，建立了人格特质、情绪调节与教学效能各维度之间的结构方程模型（SEM），在原始模型基础上，修正系数删不显著的路径，得出拟合指数最优模型。如图-1 所示。

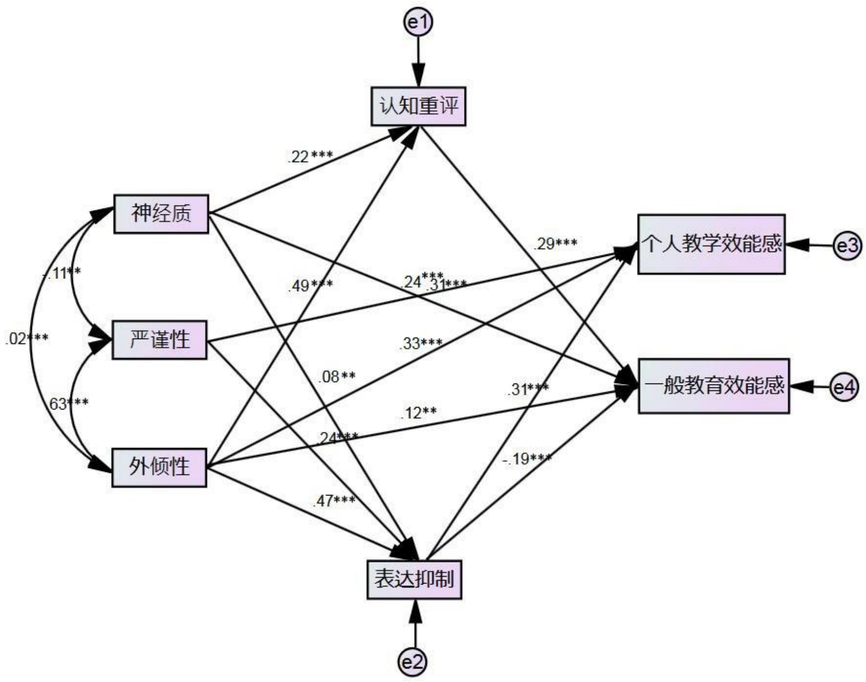


图-2 情绪调节在人格特质与教学效能的中介作用模型图

该模型以神经质、严谨性、外倾性为自变量，以个人教学效能感、一般教育效能感为因变量，以认知重评、表达抑制为中介变量，模型各项拟合指标如表-7 所示。χ^2/df=5.374 虽然大于 5，但处于临界值，在可接受范围；除了 GFI=.897 处于临界值外， CFI、NFI、IFI 均大于 0.900，符合参考标准；AGFI =.841，大于参考值标准；RMR、RMSEA 均小于 0.08，

符合参考标准。由此可见，该模型的各项拟合指标均在参考标准值范围或接近临界值，说明该模型拟合度较好。

表-7 研究模型配适拟合度检验

检测指标	χ^2/df	GFI	CFI	NFI	IFI	AGFI	RMR	RMSEA
检测结果	6.174	.897	.915	.933	.959	.843	.061	.069
参考值	<5.000	>.900	>.900	>.900	>.900	>.800	<.080	<.080

通过标准化路径系数对假设H1、H2、H3进行检验，由表-8可知，进入研究模型图的神经质、严谨性、外倾性在一定程度上与认知重评、表达抑制存在显著预测作用，故假设H1成立。神经质、严谨性、外倾性在一定程度上与个人教学效能感、一般教育效能感存在显著预测作用，故假设H2 成立。认知重评、表达抑制一定程度上与个人教学效能感、一般教育效能感存在显著预测作用，故假设H3成立。

表-8 各路径系数显著性检验表

路径	标准化路径系数（sig）	验证假设结果
神经质□认知重评	0.22***	H1 成立
神经质□表达抑制	0.08**	
严谨性□表达抑制	0.24***	
外倾性□认知重评	0.49***	
外倾性□表达抑制	0.47***	
神经质□一般教育效能感	0.31***	H2 成立
严谨性□个人教学效能感	0.24 ***	
外倾性□个人教学效能感	0.33***	
外倾性□一般教育效能感	0.12***	
认知重评□一般教育效能感	0.29***	H3 成立
表达抑制□个人教学效能感	0.31***	
表达抑制□一般教育效能感	-0.19***	

注：***p<.001；**p<.05

在上述分析的基础上，本研究再采用非参数百分位Bootstrap法对模型中的中介效应的显著性进行检验，从原始数据中随机抽取2000个Bootstrap样本，结果见表-9，所有路径的偏差矫正非参数百分位的中介效应95%的置信区间均不包含0，表明上述中介效应成立。由此可知，认知重评、表达抑制在自变量神经质、严谨性、外倾性与因变量个人教学效能感、一般教育效能感之间存在中介作用，也表明了情绪调节在人格特质与教学效能之间起到了中介作用，故假设H4成立。

表-9 中介效应显著性检验Bootstrap 分析

路径	标准化的间接效应估计值	95%的置信区间	
		下限	上限
神经质——个人教学效能感	0.025***	0.008	0.042
严谨性——个人教学效能感	0.076***	0.049	0.119
外倾性——个人教学效能感	0.146***	0.103	0.200
神经质——一般教育效能感	0.049***	0.029	0.076
严谨性——一般教育效能感	-0.046***	-0.096	-0.022
外倾性——一般教育效能感	0.053***	0.003	0.104

注：***p<.001；**p<.05

五、研究结论与建议

5.1研究结论

本研究主要得出以下结论：

第一、贵州省高职类教师人格特质现状处于中等偏上水平，人格特质在性别上存在显著差异，且男教师显著高于女教师，但是在教龄与学历上不存在显著差异。由此可知，男性教师在人格上总体比女性教师表现得更为坚韧、严谨、开放、外向，在强工作压力下表现出高抗压的能力，在与人交往的过程中更能做到游刃有余。因此，男性教师更适

合执行较高强度的工作、对外工作时。

第二、贵州省高职类教师情绪调节现状处于中等偏上水平，情绪调节在性别上存在显著差异，且男教师显著高于女教师，但是在教龄与学历上不存在显著差异。在人们的普遍认知中，男性在遇到沮丧或愤怒情绪时，多数会选择某些方式发泄自身的不满，冷静下来后会分析事情原委，理智地解决消极情绪。而女生一般则喜欢将事情压抑在心里独自消化，或者失去理智的发泄情绪（马晓硕，2012）。

第三、贵州省高职类教师教学效能现状处于中等水平，教学效能在性别上存在显著差异，男教师稍微高于女教师，但是在教龄与学历上不存在显著差异。相对女性教师而言，虽然女性教师较为心思细腻，在教育教学方面比较细心和耐心，但男性教师在性格上展现出来的外向、随和，会促进他与学生在课堂、课外的沟通交流，有利于与学生建立和保持良好的师生关系，加上男性教师在课堂上更擅长情绪掌控，这些原因都有可能帮助男性教师提高其教学效能。

第四、贵州省高职类教师人格特质、情绪调节、教学效能存在显著相关，且人格特质、情绪调节对教学效能均存在显著预测作用。

第五、贵州省高职类教师情绪调节在人格特质与教学效能之间存在部分中介作用，表明人格特质可以透过情绪调节间接影响影响教育效能。

5.2研究讨论

本研究结果表明，贵州省高职类教师情绪调节在人格特质与教学效能之间起到部分中介作用。因此，提升贵州省高职类教师人格特质和情绪调节可以增强其教学效能。

（1）健全教师人格特质

高职类教师健全的人格和是适应高职教育环境变化，应对社会、工作、家庭等各方面压力的关键。本研究发现，不同人格特征对贵州省高职类教师教学效能的影响也不同。首先，学校可以通过了解教师人格特质的缺陷来帮助教师健全其人格特质，采用量表或者访谈形式，在教师入职、考核等情境中加入人格特质方面的测量，全面了解教师人格特质

特征，并通过学习先进、心理培训、教师沙龙、素质拓展等形式，帮助教师个人完善人格特质。其次，教师个人要学会了解和完善自身人格特质，教师可以根据已开发的人格量表对自身进行评定，根据量表结果与对自身的认知，了解自身属于神经质、严谨性、宜人性、开放性、外倾性中的何种人格特质，现不足并加以完善。同时，教师还应多想优秀教师榜样学习，学习他们身上良好的品性，不断为自己塑造良好的人格。因此，通过完善教师人格特质，提高其适应不断变化的教学环境，以及在复杂的社会环境中能有效应对工作、生活中带来的各种压力，对提升其教学效能水平有着积极作用。

（2）提升教师情绪调节水平

本研究表明，情绪调节能够直接预测贵州省高职类教师教学效能，因此，可通过提高教师情绪调节水平来提升教师教学效能。情绪调节是一门心理技能，教师在进行教学的时候，要经常与学生进行接触、沟通，在课堂上难免会出现一些不良情绪，不稳定的情绪状态必然对对自身教学效果和学生学习效果造成很大影响。就教师自身而已，首先，是要充分认识容易影响自己情绪的因素有哪些，在教学活动时避免这些负面因素的发生以影响自己的情绪波动、失调。其次，教师要学会选择合适自己的情绪调节策略，本研究方程模型表明，教师多倾向于使用认知重评策略，表明在情绪发现之前，他们更懂得

控制好自己的情绪。但是不管使用何种策略，都应该合理利用某种策略来进行情绪调节，如认知重评策略，可以把认知重评策略运用到课堂上和自我情绪调节上，教师在面对师生相处过程中的消极情绪事件时，学会改变对事件的看法，提升自己多角度考虑问题的能力，从而改善师生相处模式，建立良好的师生感情，提升教学互动。

此外，教师在课堂外还应学会寻找适合自己缓解情绪、发泄情绪的方式和途径，更好地管理与疏导自身情绪。如学会找人倾诉，在情绪不稳定时找朋友、亲人或者同事进行倾诉，以达到缓解或者稳定情绪的作用。如培养一项自己喜欢的爱好，可以是打球、跑步、旅行、唱歌等等，在情绪不稳定时去从事自己喜欢的活动，分散注意力来避免情绪恶化，从而调整好的情绪去迎接新的课堂。

本研究结果表明，贵州省高职类教师情绪调节在人格特质与教学效能之间存在部分中介作用。因此，教师要提高教学效能，不仅要了解和完善自我人格特质，还要学会掌握适合自己进行情绪调节的方法和途径，通过完善人格特质和学会情绪调节来提高自己的教学效能，以高教学效能为贵州省培养更多高质量的高技能型人才，在一定程度上缓解区域高职教育的不均衡问题。

参考文献

何国伟（2016）。贵州省高职院校发展状况调查研究。*职业教育研究*，（09），27-31。胡维芳（2019）。青海高职教师人格特质与职业承诺的关系：教学效能感的中介作用。*民族高等教育研究*，7(02)，81-87。

李红卫（2009）。优秀教师的人格特质。*宁夏教育*，（03），26。林崇德（2002）。发展心理学。杭州：浙江教育出版社。

陆静萍（2013）。教师的情绪调节与学生学习动机的培养。*中国成人教育*，（05），171-173。

马晓硕（2012）。情绪调节自我效能感、人格特质和主观幸福感的关系研究。*河北大学*，石家庄。

魏娴（2019）。教师如何提升情绪管理。*智库时代*，（52），103-105。

秦丽娜、张建龙、丁英、赵蔚（2017）。高校教师课堂情绪调节能力研究。*开封教育学院学报*，37（02），150-151。

王孟成、戴晓阳、姚树桥（2011）。中国大五人格问卷的初步编制II：效度分析。*中国临床心理学杂志*，19，687-690。

王力、柳恒超、李中权、杜卫（2007）。情绪调节问卷中文版的信效度研究。*中国健康心理学杂志*，（06），503-505。

吴国来、沃建中（2006）。中学教师的人格特点研究。*心理与行为研究*，（03），184-187。

俞国良、辛涛（1995）。教师教学效能感：结构与影响因素的研究。*心理学报*，27（2），159-166。

张洁（2019）。基于积极心理学视角的高校教师教学效能感提升分析。*教育观察*，8（19），44-46。

张小军（2015）。高职教育区域均衡概念探析——高职教育区域均衡系列思考。*职业时空*，11（07），1-4。

Eysenck, H. J. (1970). The Structure of Human Personality. London: Methuen.

Gross J. J. (1998). The emerging field of emotion regulation: Integrative review. R*eview of General Psychology*, 2(3), 271-299.

Miller, A. D., Ramirez, E. M., & Murdock, T. B. (2017). The influence of teachers ' self-efficacy on perceptions: Perceived teacher competence and respect and student effort and achievement. 《*Teaching & Teacher Education*》, 64, 260-269.

Thompson, R. A. (1994). Emotion regulation: A theme in search of definition. *Monographs of the Society for Research in Child Development*, 59(2-3), 25.

贵州省少数民族地区特岗教师职业认同研究——基于松桃苗族自治县的调查
PROFESSIONAL IDENTITY OF SPECIAL POST TEACHERS IN MINORITY AREAS OF GUIZHOU——BASED ON THE SURVEY OF SONGTAO MIAO AUTONOMOUS COUNTY

蒲黎梅 [1]
Limei Pu[1]

[1] 正大管理学院中国研究生院
[1]Panyapiwat Institute of Management, Chinese Graduate School
[*]**Corresponding author: 蒲黎梅** ，**E-mail:** 1277436206@qq.com

摘要

本文选取少数民族地区特岗教师的职业认同为主题，以贵州省松桃苗族自治县的特岗教师为研究对象，结合民族地区的特殊性，调查该地区特岗教师职业认同的现状，及其在不同变量上呈现的差异特点，分析影响其职业认同的主要因素。根据主要影响因素提出具有针对性的策略建议，进而提升特岗教师职业认同水平，为"特岗计划"的有效实施提供一定的参考。深入分析该地区特岗教师的职业认同情况、影响因素后，得出以下结论：松桃苗族自治县特岗教师职业认同水平并不高，相比较而言，女性、本科学历、所学专业与任教学科一致、苗族、教龄长、月收入多的特岗教师，其职业认同水平更高；生存状况、学校管理、人际关系、个人因素均显著、正向影响价值认同、情感认同、能力认同、行为倾向和地位认同，即各影响因素均显著、正向影响特岗教师的职业认同，并且在影响特岗教师职业认同的因素中，个人因素的影响程度最大，是影响特岗教师职业认同最主要的因素。

关键词：少数民族地区 特岗教师 职业认同 松桃苗族自治县

Abstract

This article selects the professional identity of special post teachers in ethnic minority areas as the theme, takes special post teachers in Songtao Miao County, Guizhou Province as the research object, and combines the particularities of ethnic regions to investigate the current situation of special post teachers'professional identity in Songtao Miao Autonomous County, and The characteristics of its differences in different variables, analysis of the main factors affecting their professional identity. According to the main influencing factors, it puts forward targeted strategic suggestions to improve the professional identity of special post teachers, and provide a certain reference for the effective implementation of the "special post plan".deeply analyzes the professional identity and influencing factors of special post teachers in the area, and draws the following conclusion: Songtao Miao Autonomous County has a low level of professional identity for special post teachers. In comparison, special post teachers with female, bachelor's degree, majoring in the same teaching subject, Miao nationality, long teaching age, and high monthly income have a higher level of professional identity; living conditions, school management, interpersonal relations, and personal factors are all Significantly and positively affect value identification, emotional identification, ability identification, behavioral orientation, and status identification, that is, all influencing factors are significant and

positively affect the professional identification of special post teachers, and among the factors that affect the professional identification of special post teachers, personal Factors have the greatest influence and are the most important factor affecting the professional identity of special post teachers.

Key words: Minority areas; special post teachers; professional identity; Songtao Miao Autonomous County

引言

1. 研究背景

贵州省松桃苗族自治县作为西南地区典型的少数民族聚集地，是实施“特岗计划”的地区之一，在政策的引导下，每年都有大量的特岗教师进入到当地农村义务教育系统中。教师职业认同是教师从事教育工作的核心素养之一，对于教师的成长、发展来说，职业认同是其中的重要组成部分，也是研究的重要课题。随着对教师职业关注的越来越多，开展教师职业认同的研究也越来越多，通过开展教师的职业认同研究，不仅可以丰富我国教师职业领域的研究成果，对教师团队的建设、管理等均有着重要的意义。

2. 研究目的

本文选取少数民族地区特岗教师的职业认同为主题，以贵州省松桃苗族县的特岗教师为研究对象，结合民族地区的特殊性，调查松桃苗族自治县特岗教师职业认同的现状，及其在不同变量上呈现的差异特点，分析影响其职业认同的主要因素。根据主要影响因素提出具有针对性的策略建议，进而提升特岗教师职业认同水平，为“特岗计划”的有效实施提供一定的参考。

3. 研究意义

研究考察松桃苗族自治县特岗教师的职业认同程度，可以为松桃苗族自治县“特岗计划”政策的实施与完善提供参考意见，有助于特岗教师进一步认识、发展、完善自我，为其职业生涯规划提供一定的指导意义。同时，呼吁社会关注少数民族地区特岗教师群体与少数民族地区农村教育发展现状。

文献综述

1. 相关概念界定

1.1 特岗教师

特岗教师是指实施“特岗计划”政策所聘任的教师。中国教育部等部门于 2006 年联合制定并实施“特岗计划”，通过招聘高校毕业生到西部“两基”攻坚县以下的农村义务教育阶段学校任教。特岗教师实施合同管理，聘任期为 3 年，三年期满后，允许自主重新择业，对自愿留在当地学校的，经考核合格符合留任条件的要给予入编，保证其享受当地教师同等待遇。特岗教师无论是在招聘方式上，岗位特点上以及整体学历水平上都体现出了其区别于一般农村教师的特殊性。在范围上，本文所指的特岗教师是指所有由“特岗计划”招聘的 3 年聘期内的在岗教师，不包括期满留任已入编的特岗教师和服务期未满的离岗教师。

1.2 特岗教师职业认同

从特岗教师这一新兴群体的特殊性着手，将本文的特岗教师职业认同定义为：特岗教师在其所从事职业的过程中形成的对于自身职业的性质、规范、价值、意义和期望等各方面的感知和评价，从心底里接受和认可这份职业，认为它有价值、有意义，并愿意把职业规

范内化到自己的行行为中，认为自己有能力胜任这份职业，体验到幸福感与归属感。外显的行为方式是一种与离职意愿相背离的行为倾向，即职业认同高则离职意愿低，职业认同低则离职意愿高。

2. 特岗教师职业认同的相关研究

2.1 特岗教师职业认同的作用及意义

武慧芳、王爱玲、王密卿（2011）在研究中指出，特岗教师的职业认同高低，直接影响特岗教师能否安心从事教学工作，不仅会影响教师个人的专业发展，以及整个学校的教学质量，甚至还会造成整个“特岗计划”的开展与实施。特岗教师的职业认同不仅仅影响自己的工作状态以及自身职业发展，对学生的学习成绩、教学质量等均产生重要的作用。

2.2 特岗教师职业认同维度构成的研究

罗超、廖朝华（2011）通过对云南省某县的特岗教师职业状况进行调查研究，将特岗教师职业认同划分为职业认知、职业情感、职业期望和职业价值观四个维度。杨姗（2015）专门就少数民族地区特岗教师的职业认同开展研究，将职业认同划分为职业认知、职业情感认同、职业能力认同、职业行为倾向认同、职业社会地位认同五个维度，其中职业认知又划分为职业价值观、角色价值观两方面。

2.3 特岗教师职业认同的影响因素研究

赵燕婷（2009）认为，特岗教师职业认同偏低主要有人际关系、个人因素、生存状况、学校管理；其中学校的交通环境、人际关系、教师经济情况和个人心理状况因素尤为明显。敬鑫（2018）指出，由于角色冲突问题的影响，部分特岗教师对自身职业认同低，出现半路改行的情况，而通过对这一问题的深入研究，可以发现农村特岗教师队伍整体的稳定性较差，教学整体水平和质量较低等现实问题。

3. 已有研究的启示

已有研究在教师职业认同的意义、结构等方面做了大量探讨与分析，关于教师职业认同的研究已颇为成熟。近年来对特岗教师开始有所涉及，但研究成果仍然比较少，特别是少数民族地区特岗教师职业认同的研究更应引起足够的重视。

研究方法与框架

1. 研究对象

以松桃苗族自治县任职不足 3 年、且未收入当地教育系统正式编制的特岗教师为调查对象。

2. 研究方法

由于本文的需要，在研究过程中，通过设计调查问卷，对相关人员进行问卷调查，以获取相关的真实数据，为研究结果提供数据支撑。问卷的设计参考了魏淑华的《教师职业认同量表》，并结合松桃苗族自治县特岗教师的实际情况，形成了《松桃苗族自治县特岗教师职业认同调查问卷》。问卷分为三部分：第一部分是特岗教师基本情况；第二部分是特岗教师职业认同问卷；第三部分是特岗教师职业认同影响因素问卷。本次共发放问卷 260 份，回收 240 份问卷，回收率为 92.3%，有效问卷为 224 份，有效率为 93.3%。

研究结果与分析

1. 样本的基本特征描述

表 1: 样本基本信息统计表

分类	内容	频数	百分比
性别	男	63	28.12%
	女	161	71.88%
	合计	224	100%
民族	汉族	27	12.05%
	苗族	156	69.64%
	其他少数民族	41	18.30%
	合计	224	100%
年龄	21 岁及以下	45	20.09%
	22-25 岁	129	57.59%
	26-30 岁	44	19.64%
	30 岁以上	6	2.68%
	合计	224	100%
学历	大专	91	40.52%
	本科	133	59.38%
	合计	224	100%
教龄	一年以下	17	7.59%
	一年	24	10.71%
	两年	107	47.77%
	三年	76	33.93%
	合计	224	100%
主要承担的教学	小学	197	87.95%
	初中	27	12.05%
	合计	224	100%
任教学科与所学专业是否一致	是	142	63.39%
	否	82	36.61%
	合计	224	100%
月收入	2000-3000 元	141	62.95%
	3001-4000 元	62	27.68%
	4001 元以上	11	4.91%
	合计	224	100%

通过对松桃苗族自治县特岗教师的基本情况进行分析了解到，特岗教师中未婚的青年女性居多，所属民族主要是苗族，在学历上以本科学历为主，特岗教师所任教的学科与所学专业基本一致。此外，特岗教师的教龄集中在 2-3 年，具有一定的教学经验，但是整体的教学经验仍需要进一步提升。而在月收入上，特岗教师的月收入普遍集中在 2000-3000 元，月收入整体水平较低。

2. 描述性统计分析

表 2: 描述统计量分析表

维度	均值	标准差	均值的标准误
价值认同	3.39	1.890	0.906
情感认同	3.04	1.121	0.310
能力认同	3.39	1.046	0.793
行为倾向	3.44	1.104	0.221
地位认同	3.23	1.321	0.753
总体	3.28	1.972	0.919

松桃苗族自治县特岗教师职业认同调查问卷上各题目的平均分均在 3-4 分之间（满分为 5 分），其职业认同水平并不高。特岗教师作为教师中的特殊群体，其任教地点、薪资待遇等与普通教师存在一定的差别，且特岗教师的工作环境也相对艰苦。

3. 问卷的信效度分析

3.1 信度分析

表 1: 职业认同问卷信度检验

变量	Cronhach's Alpha	基于标准化项的 Cronhach's Alpha	项数
价值认同	0.768	0.767	6
情感认同	0.771	0.772	5
能力认同	0.816	0.811	5
行为倾向	0.831	0.836	6
地位认同	0.774	0.771	3

由表 3 的问卷信度检验结果可知，各变量的 α 系数均大于 0.7，说明项目之间是否具有较高的内在一致性，即该调查问卷的信度较好。

表 4: 职业认同影响因素问卷信度检验

变量	Cronhach's Alpha	基于标准化项的 Cronhach's Alpha	项数
生存状况	0.763	0.769	4
学校管理	0.786	0.780	6
人际关系	0.838	0.831	4
个人因素	0.843	0.844	6

由表 4 的问卷信度检验结果可知，各变量的 α 系数均大于 0.7，说明项目之间是否具有较高的内在一致性，即该调查问卷的信度较好。

3.2 效度分析

表 2: KMO 检验和巴特利特球度检验

	KMO 检验	巴特利特球度检验		
		近似卡方	df	P 值
职业认同问卷	0.833	6114.412	223	0.000
职业认同影响因素问卷	0.809	5865.620	223	0.000

通过 KMO 检验和巴特利特球度检验所得 KOM 值分别为 0.833、0.809，较为接近 1，KOM 值越接近 1，说明问卷中各项因子设置较为适合，且巴特利球度检验的显著性值均为 0.000，说明问卷均具有较高的效度。

4. 差异分析

4.1 独立样本 T 检验

表 6: 特岗教师职业认同的性别差异分析

维度	男（M±SD）	女（M±SD）	T 值	Sig(双侧)
价值认同	3.37±1.18	3.40±0.77	0.569	0.130
情感认同	3.00±0.82	3.09±1.62	0.209	0.069
能力认同	3.33±1.25	3.45±1.07	1.094	0.055
行为倾向	3.41±1.66	3.47±0.74	0.525	0.108
地位认同	3.19±0.63	3.27±0.93	0.313	0.083
总体	3.20±1.93	3.35±1.79	1.527	0.095

女性特岗教师的职业认同相对较好，略优于男性教师。相较于男性特岗教师来说，女性教师更追求稳定性，职业情感意识相对较强，导致女性特岗教师的职业认同水平相对

较高。

表 3: 特岗教师职业认同的学历差异分析

维度	大专（M±SD）	本科（M±SD）	T 值	Sig(双侧)
价值认同	3.37±1.78	3.40±1.67	0.219	0.265
情感认同	3.03±1.08	3.05±1.40	0.424	0.656
能力认同	3.38±1.36	3.41±0.88	1.346	0.192
行为倾向	3.41±1.76	3.45±1.32	0.810	0.120
地位认同	3.22±1.33	3.26±0.92	0.657	0.093
总体	3.27±1.91	3.30±1.91	0.989	0.113

本科学历地特岗教师职业认同情况较高，而大专学历略低。特岗教师学历的不同，使其在知识与技能的掌握方面也会有所不同，且学历在一定程度上也会影响其职业认同水平的高低。相比较而言，本科学历更能满足其职业的需要，能更好地应对特岗教师岗位中出现的各种问题。在实际的教学中，大专学历的特岗教师对对一些问题难以解决和处理，使得其在职业认同水平上略低。

4.2 单因素方差分析

表 8: 特岗教师职业认同的民族差异分析

维度	汉族（M±SD）	苗族（M±SD）	其他少数民族（M±SD）	F 值	Sig(双侧)
价值认同	3.28±0.85	3.45±1.30	3.40±0.82	0.944	0.029
情感认同	3.02±1.15	3.05±1.65	3.03±1.62	0.530	0.100
能力认同	3.41±1.34	3.40±0.56	3.37±1.12	0.183	0.121
行为倾向	3.40±0.51	3.45±0.85	3.45±0.63	0.666	0.051
地位认同	3.20±1.07	3.27±1.12	3.26±1.15	0.278	0.024
总体	3.25±1.70	3.32±1.90	3.29±1.76	-0.577	0.038

所属民族为苗族的特岗教师，其职业认同水平相对比较高，其次是其他少数民族。汉族特岗教师其职业认同水平最低，而在情感认同、能力认同、行为倾向维度上并未出现显著性差异。而苗族特岗教师基本都是当地的教师，具有一定的民族责任感与民族认同感，同时具备较强的民族归属感，使得其在职业认同水平上相对比较高。

表 9: 特岗教师职业认同的年龄差异分析

维度	21 岁及以下（M±SD）	22-25 岁（M±SD）	26-30 岁（M±SD）	30 岁以上（M±SD）	F 值	Sig(双侧)
价值认同	3.35±0.58	3.40±1.51	3.36±0.64	3.36±1.16	0.225	0.219
情感认同	3.02±1.76	3.06±0.75	3.03±0.50	3.05±1.41	0.392	0.073
能力认同	3.37±1.01	3.42±1.23	3.41±1.36	3.40±1.59	0.116	0.511
行为倾向	3.40±1.86	3.46±1.09	3.42±0.71	3.42±1.10	0.620	0.137
地位认同	3.21±1.22	3.24±0.77	3.22±0.57	3.22±1.35	0.613	0.068
总体	3.22±0.86	3.33±1.06	3.29±1.25	3.24±1.94	0.440	0.181

虽在不同年龄特岗教师中，职业认同水平略有差别，但相比较而言，差别并不大。由于本文研究的是 3 年聘任期的特岗教师，其年龄相差不大，均为年轻教师，且多为从毕业后直接进入工作岗位的，在一些观念、思想方面也相差不大，这就使得不同年龄的特岗教师的职业认同水平差距不大。

表 10: 特岗教师职业认同的月收入差异分析

维度	2000-3000 元（M±SD）	3001-4000 元（M±SD）	4001 元以上（M±SD）	F 值	Sig(双侧)
价值认同	3.22±1.32	3.26±0.95	3.33±0.77	0.798	0.075
情感认同	3.27±0.67	3.35±1.35	3.43±1.33	0.771	0.141
能力认同	3.15±1.19	3.27±0.54	3.31±0.60	0.849	0.069
行为倾向	3.19±0.76	3.21±0.81	3.35±1.03	0.837	0.090
地位认同	3.26±0.87	3.32±1.11	3.38±0.69	0.736	0.127
总体	3.21±1.08	3.30±1.29	3.35±1.21	0.894	0.053

特岗教师的职业认同随着其月收入的增加而有所提高，不过方差分析显示均未出现显著性差异。给予足够的劳动报酬，能够弥补特岗教师在教学环境、生活条件等方面的不足，而劳动报酬低，必然降低特岗教师的教学积极性，进而影响其职业认同水平的高低。

5. 相关分析与回归分析

5.1 自变量分析

表 11: 特岗教师职业认同影响因素问卷的调查结果

影响因素	平均分	标准差
生存状况	3.285	0.984
学校管理	3.297	0.802
人际关系	3.371	1.034
个人因素	3.416	1.177
总计	3.342	1.209

通过对特岗教师进行职业认同影响因素问卷的测试，发现特岗教师的得分均在3.2-3.5 分之间，总体得分为 3.342。

表 12: 特岗教师职业认同影响因素问卷各题的调查结果

维度	题号	平均分	标准差
生存状况	1	3.317	1.103
	2	3.429	1.183
	3	3.333	1.109
	4	3.360	1.063
	5	3.325	1.297
学校管理	6	3.250	0.908
	7	3.937	1.065
	8	3.187	0.867
	9	2.916	0.891
	10	3.086	1.077
人际关系	11	3.803	1.069
	12	3.029	1.275
	13	3.506	1.003
	14	3.310	0.815
	15	3.251	0.921
个人因素	16	3.264	1.216
	17	3.176	0.152
	18	3.752	1.117
	19	3.093	1.180
	20	3.180	0.834

生存状况中，松桃苗族自治县的农村学校在交通、居住条件等方面（第 1、3 题）较为欠缺，且信息闭塞（第 2 题），艰苦的工作和生活环境容易给特岗教师的心理带来落差，加之陌生的环境，会使其在心理方面产生不同程度的问题，对教学工作开展以及职业认同造成不良影响。特岗教师在工作过程中需要克服较多的困难，才能够保障教育教学活动的开展，势必影响其职业认同情况。

学校管理中，部分特岗教师表示学校的管理不太透明（第 7 题），职称晋升机制不满意（第 8 题），在对工作量和工作时间的安排上不合理（第 9 题），且没有足够的进修、培训机会以及时间、经费方面的支持（第 10 题）。学校管理不到位，特岗教师难以感受到学校对其的重视程度，这也使得特岗教师难以产生较强的归属感和认同感。

人际关系中，学生难教（第 11 题）、与同事、家长关系不好（第 11、14 题）等问题较为突出，尤其在少数民族地区，教育重视程度普遍不高，且存在大量的留守儿童，这些问题均导致学生难教，增加教学难度，使得特岗教师在教学过程中感受到无力感，难以获得成就感。此外，在与同事、家长的交流中存在的问题也会带来人际关系的问题，造成特岗教师职业认同低。

个人因素中，特岗教师均表达了幸福感低（第 18、19 题）、预想存在偏差（第 20 题）等问题，一些特岗教师在教学中感受不到幸福感，并且当初的职业选择和规划与现实有着非常大的差距，这种心理落差造成特岗教师难以在工作中保持乐观的工作心态，工作态度也不够积极，造成职业认同水平低的问题出现。

5.2 变量和模型

在本回归分析中，控制变量为人口统计学变量，包括性别、民族、年龄、学历、教龄；自变量为影响因素，包括生存状况、学校管理、人际关系、个人因素四方面，因变量为职业认同，包括价值认同、情感认同、能力认同、行为倾向和地位认同五个维度。变量描述性统计详见下表。

表 13: 变量描述性统计表

分类	分类	平均值	标准差	最大值	最小值
控制变量	性别	1.719	0.102	2	1
	民族	2.062	0.315	3	1
	年龄	2.049	0.397	4	1
	学历	1.593	0.211	2	1
	教龄	3.080	0.183	4	1
自变量	生存状况	3.285	0.984	5	1
	学校管理	3.297	0.802	5	1
	人际关系	3.371	1.034	5	1
	个人因素	3.416	1.177	5	1
因变量	价值认同	3.392	1.890	5	1
	情感认同	3.041	1.121	5	1
	能力认同	3.390	1.046	5	1
	行为倾向	3.441	1.104	5	1
	地位认同	3.232	1.321	5	1

本回归分析的模型设定为：

$$Z = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + c_1Y_1 + c_2Y_2 + c_3Y_3 + c_4Y_4 + c_5Y_5$$

其中 Z 为因变量，由于共有价值认同、情感认同、能力认同、行为倾向和地位认同五个因变量，因此共有 5 个模型；a 为常量；Xi 为自变量，X_1-X_4 分别为生存状况、学校管理、人际关系、个人因素；b_i 为自变量系数；Yi 为控制变量，Y_1-Y_5 分别为性别、民族、年龄、学历、教龄；c_i 为控制变量系数。

5.3 相关分析

表 14: 特岗教师职业认同与影响因素的相关性

影响因素		生存状况	学校管理	人际关系	个人因素	总计
职业认同	Pearson 相关性	0.568**	0.617**	0.623**	0.648**	0.618**
	显著性（双侧）	0.008	0.003	0.000	0.000	0.002

各影响因素与职业认同之间存在极显著的正相关关系，即生存状况越好、学校管理越好、人际关系越好、个人因素越好，其职业认同水平越高。其中特岗教师的个人因素影响更大，当其具备稳定的思想、观念时，其职业认同水平才会始终保持相对稳定的状态，而发生变化时，其职业认同水平也随之发生变化。而只有在特岗教师的职业认同水平不断提高的情况下，才有助于其职业的发展，提高教学质量。

5.4 回归分析

表 15: 影响因素对特岗教师职业认同的检验

		因变量：职业认同				
		价值认同	情感认同	能力认同	行为倾向	地位认同
控制变量	性别	.035	.041	-.029	-.041	.332
	民族	.163*	.062	.041	.020	.236
	年龄	.258	.301	.276	.063	.201
	学历	.597	.032*	.187	.135	.125
	教龄	.172	.381	.243	.275*	.325*
自变量	生存状况	0.433**	0.451**	0.383**	0.337**	0.410**
	学校管理	0.314**	0.330**	0.445**	0.425**	0.401**
	人际关系	0.384**	0.460**	0.324**	0.359**	0.430**
	个人因素	0.528**	0.498**	0.495**	0.516**	0.558**
	R^2	.025	.264	.380	.417	.325
	F	2.416	26.539	46.312	41.637	.324
	N	224	224	224	224	224

注：*在 0.05 水平（双侧）上显著相关，**在 0.01 水平（双侧）上显著相关。

在控制了人口统计学变量影响以后，将职业认同作为因变量分别代入价值认同、情感认同、能力认同、行为倾向和地位认同，影响因素（生存状况、学校管理、人际关系、个人因素）为自变量的回归方程模型中进行检验。表中生存状况、学校管理、人际关系、个人因素的值分别为 0.433**、0.451**、0.383**、0.337**、0.410**，0.314**、0.330**、0.445**、0.425**、0.401**，0.384**、0.460**、0.324**、0.359**、0.430**，0.528**、0.498**、0.495**、0.516**、0.558**，且显著性概率 P<0.01，说明生存状况、学校管理、人际关系、个人因素均显著、正向影响价值认同、情感认同、能力认同、行为倾向和地位认同。

表 16: 影响因素对特岗教师职业认同各维度的检验结果

	价值认同	情感认同	能力认同	行为倾向	地位认同
生存状况	0.433**	0.451**	0.383**	0.337**	0.410**
学校管理	0.314**	0.330**	0.445**	0.425**	0.401**
人际关系	0.384**	0.460**	0.324**	0.359**	0.430**
个人因素	0.528**	0.498**	0.495**	0.516**	0.558**

注：+表示存在正相关关系；-表示存在负相关关系。

因此，通过回归分析，可以看出所得实证结果验证了本文的研究假设，即松桃苗族自治县的的特岗教师其影响因素均与职业认同各维度之间存在正相关关系。

结论

1. 特岗教师职业认同情况

表 17: 特岗教师职业认同调查结果总结

	职业认同水平高	职业认同水平低
性别	女	男
年龄	22-25 岁	21 岁及以下
民族	苗族	汉族
学历	本科	大专
教龄	三年	一年以下
教学学段	小学	初中
月收入	4001 元以上	2000-3000 元

通过调查发现，不同特征特岗教师的职业认同水平受性别、年龄、民族、学历、教龄、教学学段、月收入的影响。不同特征特岗教师的职业认同水平不同，会影响教学的质量，只有把握职业认同特征，才能够更好的促进教学质量的提高。

本文对松桃苗族自治县特岗教师的基本情况、职业认同水平进行了调查研究，发现松桃苗族自治县特岗教师职业认同水平并不高，该结果与江雪清（2014）、于聪（2015）、陈艺中（2019）等学者的研究结果不一致，这些学者的研究结果显示特岗教师的职业认同水平较高。由于研究对象为不同地区的特岗教师，而本文针对的少数民族地区特岗教师在实际教学工作中的职业认同现状，可以进一步丰富特岗教师职业认同的研究内容。

2. 特岗教师职业认同影响因素情况

表 18: 影响因素对特岗教师职业认同的检验结果

	价值认同	情感认同	能力认同	行为倾向	地位认同
生存状况	0.433**	0.451**	0.383**	0.337**	0.410**
学校管理	0.314**	0.330**	0.445**	0.425**	0.401**

表 18: 影响因素对特岗教师职业认同的检验结果（续。）

	价值认同	情感认同	能力认同	行为倾向	地位认同
人际关系	0.384**	0.460**	0.324**	0.359**	0.430**
个人因素	0.528**	0.498**	0.495**	0.516**	0.558**

由上表可知，生存状况、学校管理、人际关系、个人因素均显著、正向影响价值认同、情感认同、能力认同、行为倾向和地位认同，即各影响因素均显著、正向影响特岗教师职业认同水平。通过对比相关系数可以看出，表中个人因素的值为 0.528**、0.498**、0.495**、0.516**、0.558**，均大于生存状况（0.433**、0.451**、0.383**、0.337**）、学校管理（0.433**、0.451**、0.383**、0.337**）和人际关系（0.384**、0.460**、0.324**、0.359**、0.430**）的值。因此，特岗教师的个人因素影响更大，即个人因素是影响特岗教师职业认同的主要因素。当其具备稳定的思想、观念时，其职业认同水平才会始终保持相对稳定的状态，而发生变化时，其职业认同水平也随之发生变化。而只有在特岗教师的职业认同水平不断提高的情况下，才有助于其职业的发展，从而提高教学质量。

特岗教师作为特殊的教师群体，其职业认同水平也往往与其他教师群体有所不同。陶长虹（2014）在研究中对比了特岗教师与普岗教师的职业认同水平，发现前者低于后者。周瑜群（2017）对比了特岗英语教师与普岗英语教师的职业认同，同样得出了相似的结论。

可见，就目前来看，特岗教师的职业认同低于普岗教师的职业认同是一种普遍现象，而这种现象出现的原因来自多方面。相比较于这两名学者的研究成果，本研究运用相关检验、回归分析确定了影响少数民族地区特岗教师职业认同的重要因素，并分析了影响因素中的个人因素的影响程度最大，可以在此基础上提供针对性的改善措施以稳定特岗教师队伍，保证“特岗计划”政策能为少数民族的基础教育建设发挥更有效的作用。

参考文献

陈艺中(2019).*特岗教师专业发展及其职业认同的关系研究*.硕士论文,江西师范大学.

江雪清(2014).贵州省特岗教师职业认同调查研究,*贵州师范学院学报*,30(03),47-50.

敬鑫(2018).*辽宁省"特岗教师"角色认同问题的研究*.硕士论文,沈阳师范大学.

罗超&廖朝华(2011).特岗教师的职业认同感研究——基于云南省鲁甸县特岗教师的现状调查分析,*教育理论与实践*,31(29),45-47.

陶长虹(2014).*农村特岗教师与普岗教师职业认同的比较研究*.硕士论文,云南大学.

武慧芳，王爱玲&王密卿(2011),河北省特岗教师职业认同的调查研究,*廊坊师范学院学报*,(04),98-100.

杨姗(2015).*少数民族地区"特岗教师"的职业认同现状调查研究*.硕士论文,西安外国语大学.

于聪(2015). *"特岗教师"职业认同研究*.硕士论文,延边大学.

赵燕婷(2009).*农村"特岗教师"职业认同的调查研究*.硕士论文,西北师范大学.

周瑜群(2017).*广西特岗英语教师与初任普岗英语教师职业认同对比研究*.硕士论文,广西师范大学.