



# Doctoral Degree Changes the Individual Life Expectations: Case Study of PhD Holders from Northeast Normal University

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## Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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## ABSTRACT

In order to know the life expectations related to a doctoral degree, this study examined the factors that change PhD holders' life expectations from Northeast Normal University after completion of a PhD degree. The data was collected using interviews with a sample size of three PhD holders from Northeast Normal University which is located in Northern part of China. Semi-structured interviews were conducted to narrate their life experiences concerning how the doctoral degree changed their

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expectations. The purpose of this qualitative study was to gauge to extent PhD holders personal satisfaction, research skills, and expertise in their field. Additionally, opportunity, networking and recognition, and intellectual growth are the factors that were found to be involved in life expectations related to the doctoral degree. Also, this study describes the career and academic goals of PhD holders and their beliefs were the main factors that change the individual life expectations related to a doctoral degree. Drawing on the PhD holder's life expectations related to PhD degree, this study suggests that pursuing a PhD degree can be a transformative experience that reshapes Ph.D. holders' life expectations, including their personal experiences, goals, beliefs, and values.

*Keywords: Doctoral Degree in China; life expectations.*

## 1. INTRODUCTION

Doctoral education is vital in a globalized knowledge-driven economy because highly educated and professional manpower is becoming increasingly critical in preserving and strengthening national competitiveness [1]. As a result, many nations have undertaken various initiatives to boost the competitiveness of their Ph.D. [2-4] programs [5]. Attracting the top doctorate students from around the world allows countries to establish a leadership position in research and innovation, and several countries have established strategies to foster an appealing research environment for potential students [6,7].

Doctoral degree attainment has risen dramatically in industrialized economies. However, present trends suggest that 2.3% of today's young adults will pursue PhD degrees at some time [8]. In 2019, the average PhD graduation rate among Organization for Economic Co-operation and Development (OECD) nations was 67%. This indicates that roughly two out of every three students who begin a doctoral program complete it and graduate with a Ph.D. The rate of graduation varies significantly by country. For instance, the United States has a 57% doctoral graduation rate. As a result, 43% of students who begin a PhD in the United States still need to complete it. The United Kingdom has a 71% graduation rate. 29% of PhD students still need to complete their studies. Switzerland has the highest rate, with more than 90%. Less than 10% still need to meet their studies. Mexico has the lowest rate, with 43% of students failing to complete their doctoral program. Most OECD countries have lower graduation rates for Ph.D. programs than undergraduate bachelor's degree programs. Ph.D. programs often take 4+ years to complete, with a greater dropout rate than at the undergraduate level [9-16].

Doctoral students have many expectations regarding their doctoral degree, such as time to degree, socialization procedures, supervisory roles and relationships, and learning environment [17]. Research on students in higher education has focused chiefly on their motivation, achievement, and well-being, ignoring aspects pertinent to doctorate students' mental, physiological, motivational, and social experiences [18]. Second, a substantial study has been conducted on doctoral students' experiences during their Ph.D. journey and on high-quality doctorate programs. Third, considerable research has focused on the impact of PhD studies on people's professional and personal life. Fourth, some research investigated the occurrence and type of mismatch between PhD candidates' expectations and experience during their studies [17]. The phenomena of PhD students' life expectations after their doctorate still need to be clarified. As a result, additional research is needed, mainly qualitative research, to understand how a doctorate impacts the life aspirations of individuals, particularly international academics studying abroad. There is still a mystery, and more research is needed to follow how individuals' life expectations change after receiving a doctorate. As a result, the purpose of this study was to shed light and open up new frontiers on doctoral graduates' perspectives on how the doctorate impacts their life aspirations Teowkul K, et al [19].

### 1.1 Purpose of the Research

The research aims to explore the factors that change PhD holders' life expectations from Northeast Normal University (NENU) after graduation of PhD degree.

### 1.2 Specific Objectives

The specific objectives are to investigate the meaning of a doctoral degree to the Ph.D. holder,

to explore the meaning of individual life expectations related to the doctoral degree, and to explore how the doctoral degree changes individual life expectations.

### 1.3 Research Questions

- a) What is the meaning of a doctoral degree to the Ph.D. holder?
- b) What is the meaning of individual life expectations related to the doctoral degree?
- c) How the doctoral degree changes individual life expectations?

## 2. REVIEW OF LITERATURE

### 2.1 Doctoral Education: A New Paradigm for Teaching and Research

Doctoral education has changed significantly in recent decades in response to evolving societal needs and expectations Cardoso S. et al [20]. Historically, doctoral degrees focused on developing stewards of academic disciplines through teaching and research Zhou, E., & Okahana, H. [21]. However, over time, the Ph.D. became training for a research career even outside academia Barnacle R., et al. [22]. More recently, doctoral education has been impacted by the rise of the knowledge economy and increased policy focus on research and innovation for economic competitiveness [23]. As a result, there has been a global trend toward reforming and restructuring doctoral programs to align with new societal roles [24]. Governments and universities worldwide are reinventing doctoral curricula, supervision models, and degree timelines and requirements [25]. These reforms have shifted doctoral student profiles, research areas, expectations, and discourses [24]. Overall, a paradigm change exists in how doctoral education is conceptualized and delivered in response to changing societal roles and demands. However, tensions remain around research versus teaching orientations in doctoral training.

### 2.2 The Situation of Doctoral Education in China

Doctoral education in China has expanded rapidly since being formally established in the early 1980s, making it one of the largest doctoral systems globally Zhu, J., Zhang, Y., Zheng, C. [26] Wu [27]. The establishment of doctoral programs can be traced back to 1978 after the Cultural Revolution ended when the central government invested heavily in rebuilding postgraduate education to address a severe

shortage of experts Zhu, J., Zhang, Y., Zheng, C. [26] Wu [27]. In 1983, the first doctoral degrees were awarded to 18 students [28].

The development of doctoral education in China can be categorized into three main stages Zhu, J., Zhang, Y., Zheng, C. [26] Wu [27]. (1) Late 1970s to early 1990s: Focus on quality control by utilizing returned scholars from abroad and pre-Revolution era experts to establish doctoral training. Strict oversight by the central government over approved institutions, programs, and supervisors [28]. (2) The 1990s: Rapid expansion to meet the demand for highly qualified professionals. Annual growth in doctoral enrollments averaged 20.6% from 1992-1999 [29]. More institutions were approved to establish graduate schools. (3) 1999-2010s: Huge growth alongside massification of higher education. Doctoral enrollment increased from 20,000 in 1999 to over 60,000 in 2010 [30].

The central government has vigorously promoted doctoral expansion and maintained tight control over all aspects, ensuring rapid quantitative growth and drawing critiques about the impact on quality, fairness, and meeting local needs [31,27, 32,33]. In conclusion, doctoral education in China has grown remarkably quickly but continues to grapple with quality and equity concerns arising from the government's approach of rapid top-down expansion and strict oversight.

### 2.3 Doctoral Student Expectations and Experiences

Doctoral students come from diverse backgrounds and stages of life, so their expectations of pursuing a PhD are shaped by various factors [34,35]. These include prior educational experiences, exposure to research culture, professional experience, family responsibilities, and personal goals [35]. Given this diversity, it is reasonable to assume doctoral expectations vary considerably [36]. Applicants may not initially conceptualize research the same way as academics, causing some students to struggle with expectations [37].

Life Expectations play a crucial role in doctoral students' experiences and satisfaction. There is extensive evidence that unmet expectations negatively impact students' perceptions of their learning environment, supervision, and overall well-being [38,39,36,40,41]. In a study on attrition, 20% of students cited being a "wrong fit" or the degree not being "for them" as reasons for dropout, indicating a mismatch between

expectations and realities [37]. Another study found two key areas of mismatched expectations and experiences - academic and social-personal [39].

While expectations are widely recognized as necessary, there needs to be more understanding of the prevalence and nature of unmet expectations. The assumption that unfulfilled expectations universally cause dissatisfaction lacks robust evidence [36]. A deeper insight into the extent of unrealistic expectations is needed to enhance student satisfaction and provide appropriate support [35]. Properly managing expectations is critical for doctoral student success in navigating a complex learning journey.

### 3. METHOD

The researcher employed a purposive sampling method to select participants who had graduated during different periods, as this enabled the observation of changes in individual life expectations and career pursuits over time about their graduation date. By presenting unique case studies, Campbell S, et al. [42] demonstrated how purposive sampling can be effectively incorporated into different contexts, depending on the specific design of the study. The sample procedures effectively position each study in terms of the reliability and credibility of data collecting and analysis. The chosen method of purposive sampling in each case is consistent with the research methodology, goals, and objectives, effectively addressing all areas of rigor. The researcher conducted in-depth interviews in order to understand their expectations before studying at Northern East Normal University (NENU), their experiences, and their dreams during the study as well as their life expectations after graduation. Brinkmann, S., & Kvale, S. [43] depth interview provide a meticulous assessment of particular instances, enhancing the analysis with personal narratives and experiences. Each interview was based on a semi-structured interview which took approximately 30-50 minutes.

#### 3.1 Participants

In this study, the data used were drawn from doctorate students who graduated from the Faculty of Education, Northeast Normal University. The study collected qualitative data on doctorate students' experience in NENU, their dreams during their studies, and their career plans, dreams, and expectations after

graduation. A total of three doctorate students, including one who graduated in 2019, another who graduated in 2021, and a third who is scheduled to graduate in 2022, participated in this interview.

The participants are from Southeast Asia, Africa, and Central Asia. Among the total respondents, 33.33% were female, and 66.66 % were male.

#### 3.2 Data Collection & Analysis

During the interview, the researcher chose Zoom to build rapport with the interviewees and to get more data quickly. Each interview was recorded with the interviewee's agreement, and the researcher transcribed all interview data afterward. The researcher used a mobile phone for audio recording because it can save many audio records with a transparent sound system. It helped the researcher transcribe data as it played easily and comfortably.

Due to the time differences between China and foreign countries, internal connection, and some personal conditions of the interviewees, the researcher postponed the arrangement of the interview time and did many phone calls by sending many voice messages to them. For 3 participants, the researcher interviewed for about 20 days to get reliable data for this research.

This study analyzed the collected recorded audio from interviews qualitatively using the thematic coding technique. Naeem, M., et al. [44] Bazeley, P. [45] Braun V, Clarke V [46] thematic analysis is a widely used method employed by qualitative researchers to analyze qualitative data, typically consisting of rich descriptive information. Recorded audio and handwritten data were transcribed comprehensively and reduced to specifically interpretable themes and sub-themes relevant to research questions and objectives. The themes that began to emerge from the interview transcripts were used to describe the meaning of a doctoral degree to the Ph.D. holder, individual life expectations related to the doctoral degree, and how the degree changes individual life expectations.

The following six steps of qualitative data analysis were used in analyzing data. First, following the interviews, transcripts of the sessions were transcribed. Second, the researcher repeatedly read each transcript to familiarize herself with the interview. Third, open codes (labels) were assigned manually on the printed transcriptions, which include the factors of life expectation related to the doctoral degree.

**Table 1. Demographics information of PhD Graduate**

<b>Name</b>	<b>Gender</b>	<b>Year of Graduation</b>	<b>Location</b>
Jasmine	Female	2022	Africa
Brian	Male	2019	Southeast Asia
David	Male	2020	Central Asia

Fourth, the obtained labels from the entire transcription were grouped into categories and tabulated with the quotations and the respondents whose quotations were picked. Fifth, the new categories resulting from axial coding were reviewed to examine their relevance in answering research questions. Finally, the selected codes from the three participants were integrated based on the research questions they were meant to represent to form themes. There were 3, 3, 2 themes retained from the participants concerning the first, second, and third research questions. The researcher did the whole process of qualitative data analysis and sorting themes and sub-themes, and it took more than three days. The whole process was done by manual analysis, which is time-consuming, but the results are more effective and understandable to the readers.

#### 4. RESULTS AND DISCUSSION

This section presents data on the findings of the individual's life expectations after graduation from Ph.D. degree. This section attempted to answer the research questions such as (i) what is the meaning of a doctoral degree to the Ph.D. holder? (ii) What is the meaning of individual life expectations related to the doctoral degree? (iii) How the doctoral degree changes individual life expectations? Hence this study focused on studying and analyzing the factors of the meaning of the doctoral degree for the Ph.D. holder, investigating the meaning of individual life expectations related to the doctoral degree of Ph.D. holders and which factors change the individual life expectation after graduation.

The study's finding was arranged according to the meaning of the doctoral degree of the PhD holders, individual life expectations related to the doctoral degree, and how their doctoral degree changed their life expectation after graduation.

##### 4.1 Rewarding Experiences Related to Research Skills and Personal Satisfaction

A doctoral degree represents the pinnacle of academic attainment. According to this study, the

doctoral path is profoundly meaningful in various dimensions for people who achieve the summit of Ph.D. holders.

According to the research finding, each interviewer used different perspectives on the meaning of a doctoral degree. To answer the research question one of "what is the meaning of a doctoral degree to the Ph.D. holder? Participants described the meaning of a doctoral degree as the highest academic degree, rewarding experiences, and opportunities to understand the world. They believed that the meaning of a doctoral degree is meaningful for them in various ways.

In this case, it is worth exploring the meaning of a doctoral degree, a stepping stone to research skills that can solve educational problems. The results indicated that participants shared the meaning that a doctoral degree is a rewarding experience that can lead to a sense of accomplishment and personal satisfaction. Some participants viewed the meaning of a doctoral degree as a significant achievement to understand himself/herself and understand the society that can open up a world of opportunities.

Although the participants used different perspectives on the meaning of a doctoral degree, there were some similarities in understanding in defining the meaning of a doctoral degree. Two interviewees define the doctoral degree means personal satisfaction for themselves. Doing a doctoral degree gave them personal satisfaction and rewarding experiences because a Ph.D. is the most significant degree in the world. Before receiving the degree, the speaker believed others inflated its significance and that it was not a "big deal." They undervalued the worth of a PhD. Their attitude shifted after completing their doctoral studies and receiving the degree. The Ph.D. provided them with more self-assurance.

Obtaining the degree was a transforming experience that transformed their frame of reference and forced them to recognize the gravitas of being a PhD holder. It inspired personal confidence in them that they had not

expected. One of the respondents named, Ms. Jasmine, who graduated doctoral degree in 2022, disseminated:

*I think people were exaggerating it, but I did not think it was a big deal. I have confidence after my Ph.D. Degree.*

Additionally, she said:

*You are a big person ...you know your education is very high ...to me, it means how it does not mean to me . .to me the ability to see things differently that is really what it means to me.*

Similarly, Mr. Brian, another respondent who graduated with a doctoral degree in 2019, has similar opinions about the meaning of a Ph.D. degree. According to his experience, a doctoral degree means a rewarding experience that changes him into a new person. A PhD was personally satisfying for him. It gave them a sense of accomplishment and fulfillment. Completing the degree made the interviewee feel respected and admired by everyone around them. Using the "Dr." title and identifying oneself as a PhD holder automatically confers respect. The cultural connections with the title "doctor" make him believe he has entered an elite academic group that is widely recognized. He proclaimed:

*PhD degree is rewarding for me. When I finish my Ph.D., Everyone will respect and be proud of me when I add the doctor or Ph.D. because of the highest academic degree.*

He continuously said that a doctoral degree is a research skill that prepares him for solving educational problems and becoming an independent researcher.

Another respondent, Mr. David, mentioned the meaning of a doctoral degree. For him, a doctoral degree opened up many opportunities to reach his goal. He said that a Ph.D. is a long process of knowledge that opened his mind, and he found his goals and what he wanted to be. The doctorate was personally meaningful since it enabled him to work towards and attain his professional and academic objectives.

A PhD gave him the knowledge and skills required for an academic career, whether teaching as an educator or conducting research. The Ph.D. program taught transferable qualities

such as teamwork and intellectual leadership. It changes him a lot to become an expert in the research field to work as an educator. He claimed:

*PhD degree is meaningful to me and helped me and sculpt me to reach my goals and my dreams related to my job and my education. I learned to conduct research, to think critically, and to communicate with others. A Ph.D. Degree also developed the skills I need to teach as an educator or work in a research team.*

Therefore, the intense inner fulfillment and public adoration that comes with earning the prestigious title of "doctor" after years of doctoral research. It is regarded as the pinnacle of intellectual achievement deserving of esteem. The doctoral degree was profoundly meaningful since it allowed personal development, personal satisfaction, expertise, and academic aspirations. It shaped the interviewees' life paths and rewarding experiences for them.

#### **4.2 Individual Life Expectations Related to the Doctoral Degree**

Life expectation is some motivation that plays a significant role in doing a doctoral degree. Life expectation means individuals' hopes, beliefs, dreams, and assumptions about their future. Everybody has individual life expectations when they have conducted the Ph.D. degree. Ph.D. candidates are adult learners with a broad range of educational and career expectations Pearson et al. [1]. In this study, concerning to the second research questions of "(ii) what is the meaning of individual life expectations related to the doctoral degree?", three participants had different and unique different life expectations related to a doctoral degree depend on the values, interests, and circumstances. According to the study, the participants are international scholars from three countries for PhD degrees of CSC scholarship. So, their life expectation related to the doctoral degree is very interesting and unique to each other. As a result, three themes emerged: opportunity, networking and recognition, and intellectual growth. Under the theme of opportunity, sub-themes like career advancement, financial opportunity, and successful educators come out. Secondly, the theme of networking and recognition includes internationalization and social recognition emerged. Third, the theme of intellectual growth includes a broader view and critical thinking skills.

**Life Expectation as an Opportunity:** Opportunity is one of the life expectations of a doctoral degree. A doctoral degree can open up many doors to new professional and personal opportunities. As the opportunity deals with the life expectations of the participants, this study covers career advancement, financial opportunity, and successful educators. Participants cited career advancement as her life expectation of a doctoral degree.

One participant said she is not looking for a new job and her expectation is like moving from one level to another in her previous job. Rather than expecting a new job, she expected the degree would help them to advance in their current position - "to move one level to another" professionally. She believed the Ph.D. would lead to satisfied expectations regarding advancement in their function or firm after graduation rather than triggering an utterly new job search. The relevance of the PhD degree for this individual entails exploiting it to facilitate vertically moving up within their current employment setting and expectations around that career growth. Ms. Jasmine said:

*I am not looking for a new job, so thinking like expectation is not like new expectation, like how to move one level to another than my expectation.*

Some participants applied for CSC scholarships for doctoral degrees for financial opportunities. PhD degree is the highest degree in the world. It means that obtaining a doctoral degree has a more considerable earning potential in one's profession than obtaining a lower level of education. The capacity to command higher pay in the labor market is directly related to getting the highest academic certification (a doctorate). It implies that the PhD has professional and financial ramifications, implying that holders of a doctorate will have skills and qualifications that companies will pay more for. After completing this degree in a foreign country like China, they can get jobs quickly in local or international organizations. If they get a Ph.D. degree, finding high-earning jobs in local or international organizations is easy. Mr. Brian exposed:

*If you get a Ph.D degree, you will earn more money in the job than lower education level.*

Moreover, he added that he wants to be a successful educator because he expects a doctoral degree to add much knowledge, skills,

and expertise. Developing skills and knowledge to impart learnings to others as a teacher effectively was an essential meaning of the PhD for them. The degree would allow them to improve their abilities and credibility as educators capable of successfully imparting knowledge to students/learners. The scholarship was significant in obtaining a Ph.D. and expanding their skill set and qualifications as an instructor. The Ph.D. process was significant for this individual in becoming a more proficient, successful, and impactful educator. After studying, he can transfer this knowledge as a successful educator. He uttered:

*This is my main dream of applying to CSC related to my job..... how can I be a successful educator to transfer skills and knowledge to others.*

Therefore, opportunities for career advancement, financial opportunity, and successful education are individual life expectations related to a doctoral degree. The Ph.D. would help them advance in their existing position rather than changing jobs. The doctoral degree is relevant because it permits positions and earnings higher than those available to those without the PhD distinction. The Ph.D. program was designed to help students realize their career goals of becoming educators who can professionally convey information and constructively influence learners' lives.

**Life Expectation as a Networking and Recognition:** Networking and recognition are one factors of life expectation of a doctoral degree. Networking can help the participants build relationships with many internationals in the same field or different fields, leading to research collaborations and other forms of support. Networking can develop the socialization of research students studying foreign countries to improve their knowledge of different countries Pilbeam, C., Lloyd-Jones, G., & Denyer, D. [47]. Many people consider obtaining a Ph.D. an entry point into elite academic networks. Doctoral programs allow students to interact with prominent academics in their field. These networking opportunities can result in beneficial collaborations, mentorship relationships, letters of recommendation, and professional advancement.

In this research, interviewees said that they applied for a CSC (China Scholarship Council) scholarship to gain foreign experience. Studying

for a Ph.D. in China would expose students to a variety of by allowing them to meet and engage with people from all over the world. Part of the degree's relevance was becoming more internationalized - obtaining viewpoints, contacts, and cultural abilities beyond their native country. For this person, the Ph.D.'s significance is partly based on the anticipated intercultural benefits of an international education surrounding students worldwide. The Ph.D. journey represented an opportunity for them to internationalize themselves, which they valued professionally and personally. One of the participants, Mr. Brian, said that his life expectation of studying Ph.D. degree is that he will internalize by meeting with many countries, and he expects that he can study the educational systems and policies of many countries. He commented:

*My expectation was like this "Why I applied to CSC is that I will be more internationalized because I can meet many countries such as Tanzania, Russia, and so on.*

Another exciting life expectation related to the doctoral degree is social recognition. Social recognition can give a sense of accomplishment and motivate the participants to continue and apply Ph.D. degree. People feel acknowledged by the community, their family members, colleagues, etc. will motivate them to start and pursue the Ph.D. degree. Gaining higher esteem and pride after completing their doctorate is a critical social aspect for this person. They anticipate that the PhD, the most significant academic degree, will improve their social position and how others see them. The social connotations of the degree--respect, validation, and admiration from others--play a significant role in this person's motives and the meaning they attach to a PhD. Mr. Brian hopes that a doctoral degree will give him social dignity, which is one of his life's expectations him applying for a doctoral degree.

*Social factors if I talk about social factors so in society. When I finish my Ph.D., I hope everyone will feel respect and pride in me because Ph.D. is the highest academic degree.*

Additionally, networking and recognition can lead the participants to socialize among international students to study further, and social recognition can motivate participants to pursue the life expectation related to the doctoral degree.

### **Life Expectation as an Intellectual Growth:**

Another factor of life expectation of a doctoral degree is intellectual growth. Doctoral programs are designed to give students the opportunity to gain a deep understanding of their chosen field and develop the critical thinking and research skills necessary to make significant contributions to their field. Under the theme of intellectual growth, two sub-themes will emerge: broader view and critical thinking skills. This sub-theme reflects their dreams and ideas of a doctoral degree.

A broader view highlights the importance of understanding different perspectives and cultures. Their motive is a desire for intellectual and personal development - to "open" their minds through high academic rigor. The idea that the Ph.D. program will broaden their perspectives and thinking methods is part of the relevance of the experience. Curiosity and exploration are implied, with the PhD being used to push limits and achieve a more profound understanding. The PhD signifies a learning path to enhance the mind, self, and understanding of the social world. This person values the doctorate as a conduit for mind-opening discovery and increased understanding of society and human behaviour in general. One participant mentioned that by expanding his horizons, he wanted to become better-rounded and significantly impact the world. Mr. David commented:

*My motivation was that I wanted to open my mind up and I want to explore myself. Moreover, I want to know how humans behave nicely in society.*

Similarly, Mr. Brian has similar life expectations related to a doctoral degree. He said he wanted to have a broader sense of the world education system, which pushed him to study for a doctoral degree. He anticipated the Ph.D. program would allow him to explore educational institutions and ideas more thoroughly and clearly. The PhD may result in genuine intellectual growth and illumination of educational systems worldwide. The PhD process was necessary to gain a greater understanding of education and its role or impact on society. A primary goal and projected benefit were to broaden and deepen their understanding of educational systems and issues. He said:

*I expected to study clearer and more profound ideas about the different education systems to understand the world better.*



Another comment comes from Mr. Brian, whose expectation related to the doctoral degree is developing critical thinking skills. This skill is essential for doctoral students because it allows them to conduct research, write dissertations, and contribute significantly to their field. The interviewee considered the Ph.D. program as a chance to improve and polish ("polish") their abilities and experience. A Ph.D. was anticipated to aid in the development of critical thinking skills. Joining the Ph.D. program was motivated by the anticipated benefits of improving their ability to think critically, work independently, and apply high-level skills. He saw significant value in the arduous training required for a PhD, anticipating academic and personal advancement. The doctoral process was a valuable method for him to broaden their skill set, transforming him into a more discerning, self-directed researcher. Opportunities for further professional development and lifetime learning skills were significant components of the projected relevance of enrolling in a Ph.D. program. Mr. Brian commented:

*I decided to join the doctorate opportunity, so a Ph.D. added a lot of that polished all my skills and expertise and independent work that will develop my critical thinking skills.*

Mr. David thought that the Ph.D. experience would change their perspective and abilities in ways that would allow them to solve educational difficulties. Gaining knowledge and critical faculties to influence schooling positively was a fundamental life expectation that provided meaning and purpose to the PhD attempt. He has the opinion of the life expectation of a doctoral degree. He wanted to become a problem solver of educational and social problems that would open his mind and polish his skills. Mr. David bared:

*The life expectation during my Ph.D. was about updating my mind and knowledge by developing my critical thinking to become a problem solver.....*

Therefore, a broader view and critical thinking skills are under the theme of intellectual development, which is also the life expectation of doctoral students in this study.

### **4.3 Changes of Life Expectations of PhD Holders During and after PhD Program**

The life expectations of a Ph.D. holder change significantly after graduation. This is a time of

great transition but can also be an excellent opportunity for a Ph.D. holder. In this study, three participants are from different countries with different backgrounds in the job. So, the pattern and experience of changes in life expectations are different from each other.

In this study, educational training is a powerful tool to help people achieve their life expectations. Education training like PhD four-year journey helps people to acquire new knowledge and skills, gain new perspectives, network with other professionals, and increase their confidence. This can lead to changes in their values, beliefs, and goals. Moreover, other factors, such as personal experiences, family and friends, and cultural background, can also play a role in changing their life expectations. Therefore, in this study, to answer the third research questions of "(iii) How the doctoral degree changes individual life expectations?" two themes emerged, such goals changes and development of beliefs of PhD holders during and after the PhD program.

**Goal Changes During and After the PhD Program:** PhD holders are typically highly motivated and ambitious individuals with high expectations. During the PhD, most of one's energy and priorities are focused on finishing the research and dissertation. However, fresh graduates are propelled upon graduation into career-building, networking, and academic ambitions. Beyond credentials, finding greater meaning and purpose in one's profession becomes critical. They may have a solid goal to make a difference in the world, contribute to their field of study, or achieve higher academic success after graduation. Under goals, two sub-themes emerged: career goals and academic goals.

As Ph.D. holders gain more experience and knowledge, they may find that their interests have changed. One participant, Ms. Jasmine, her goals and viewpoints changed during her Ph.D. program, which was different from what she expected when she started. The university's instruction and atmosphere, the PhD process and environment gave her more direction and shifted their perspectives on potential future routes. The notion is that the PhD experience can significantly change someone's future ambitions and visions through exposure to new ideas. After Ph.D. training at NENU, she gained more experience and knowledge, and she found that her interest changed, and she changed her career goals. During the study, she changed her

perspective of seeing everything. She commented:

*During my study, I changed courses because of the train and the university's culture. It changed my perspective of what I wanted to become, so I changed from nothing because I had no dreams. So...I changed.*

Ms. Jasmine said that she could see everything differently. Because of the culture and training, she gained much knowledge, and she found a career that was more suitable for her. During her study time, she got an opportunity to guide other students' research work. It is a starting point to change the perspectives that motivate her to change her career after graduation of PhD degree.

*When I was dreaming, my perspective changed, and why perspective changed because I was allowed by a faculty of Education to nurture and guide other students. So, the opportunity to guide and work with other students. Reading other's people work and advising them on their research changed me from nothing to something. I started feeling like I had to be a teacher ...a university teacher. Since then, something to drive me to work with most students because I always volunteer and attend seminars. That helped me grow, and after I graduated, I came back home with all energies and expectations is I would be teaching at a higher education institution.*

Another participant, Mr. Brian, had experiences in his academic life. According to the respondent, a PhD would lead to more excellent intercultural encounters and global contacts. The possibility to develop relationships with people from different cultural backgrounds was valued. For him, one of the essential aspects of doctorate education was its ability to stimulate internationalization and variety.

These experiences shaped his aims and objectives in areas other than education. Previously, he wanted to be a successful teacher; today, he also wants to drive policy reform. The Ph.D. program extended his perspective on how they could apply their expertise. Overall, the implication is that the international features of the Ph.D. program broadened the individual's educational ambitions and worldview. He had one dream about his career during his study:

*After studying NENU, meeting with international friends, and visiting different countries working with international scholars, I found a chance in a good way. I actually want to be involved in some policy-making for the education of not only successful educators but also, I want to work in the education policy of my country.*

Therefore, he went to his country after graduation, expecting to begin a career there immediately. However, despite his best intentions, things went differently than planned, and his plans were altered. The implication is that, even if a person has definite goals and expectations after completing a Ph.D., life expectations, such as academic aspirations, can change him after graduation. However, unexpected things happened to him that changed his academic life goal. He commented:

*Actually, when I returned to my country, I intended to stay there, and I will not come back for post-doctorate, but sometimes your plan does not work. You are planning something, but it is not working, so the same thing happens to me. I went back in July and was about to join one university in ..... They interviewed me, and I was about to join the position of director academic. However, due to some matters we will discuss, like the conditions and contract and so on... ....in between I just applied for one post-doctorate with the Shanxi normal university when I returned from China. They contacted me. They wanted to hire me they interviewed me. So decided to join that post-doctorate opportunity.....*

Following their Ph.D., newly graduated students seek academic employment such as professors, postdoctoral posts, or industry careers. Goals change as abilities for new positions such as teaching, management, communication, and leadership are developed. Some interviewees' goals are outside academia; their aspirations are to pursue research passion projects or applied work. Some interviewees' specialized education, such as postdoctoral fellowships, is frequently seen to improve employability.

**Development of Belief During and After the PhD Program:** Belief is a feeling that something is true or accurate, even without proof. Beliefs can be based on evidence, but they can also be based on faith or personal experience. Beliefs are important because they shape people's

thoughts, feelings, and actions. Educational training can change people's beliefs in several ways. Some studies have shown that educational training can change people's attitudes, values, and worldviews.

In this research, one interviewee said his life expectation changed during the NENU. His teachers, supervisor, and friend are significant in changing his knowledge and skills. Moreover, looking back, he believes his Ph.D. program experience exceeded this goal and provided him with real mental improvement. In upgrading his cognitive processes, such as beliefs, the PhD process delivered the intellectual stimulation and shaping they had hoped for. Mr. David said:

*I mainly evaluate myself and what changes are being happened in my mind. So actually, the life expectation during my PhD was about updating my mind and knowledge, so I think I went through this process very well because of my teachers and supervisor...*

It implies that the interviewee's attitude, expectations, and beliefs shifted following their Ph.D. program. Following their Ph.D., their ideas shifted to emphasize silver linings and opportunities for growth in the face of hardship. Mr. David told his story of how his values, belief, attitudes, and thinking changed after graduation of PhD degree. He commented:

*So, this is how my observation, my life expectation changed. During this time, I can always see positivity, even negatively.*

He continuously said that his PhD degree gave him a deeper understanding of society and human beings. It opened his eyes to the many problems happening in the world, inspiring him to find solutions. So, he became a problem solver, always looking for ways to improve the world. Mr. David said:

*My PhD helped me understand society and the meaning of why we are human. Okay. Furthermore, it opened up my mind. So, it changed my life to see something. So, I became a problem solver. First, I became a person who can critique something for the betterment..... Now, I have become a person who can always see positivity. So, it changed the meaning from an average person to a problem solver/ researcher.... My mind changed... I was not a problem solver before; I am a problem solver now; I*

*could not find a positive in an activity even though it was straightforward to find an activity a positive, but now I can find a positive even in an activity...*

Therefore, belief is one factor of individual life expectations after graduation. Changes of belief as a problem solver with open-minded and positivism is a significant factor after graduation as Ph.D. holder.

## 5. CONCLUSION

The study's findings provide some intriguing insights into how a doctoral degree affects individual life expectancies and, perhaps, the PhD holders of NENU. The findings should be seen with caution because they are related to a primary purpose sample of Ph.D. holders explicitly chosen because of their life goals after graduation from their Ph.D. degree, and they are not intended to be generalized to all Ph.D. holders. The key finding of this study is that these participants viewed the meaning of a Ph.D. degree as a meaningful experience for academic growth, personal satisfaction, and broadening their position. Furthermore, these findings are consistent with previous research that highlighted self-satisfaction and academic advancement as factors influencing an individual's interpretation of a PhD degree [48].

In this study, obtaining a Ph.D. positively impacts people's personal and professional lives. Participants in the survey said that their Ph.D. programs assisted them in developing a sense of purpose and direction in their life. They also stated that their Ph.D. programs assisted them in developing a sense of self-confidence and self-efficacy through the enhancement of research skills. This finding is consistent with prior research, which has demonstrated that people who pursue higher degrees do so to improve their self-confidence and self-efficacy (Boudreau & Lichtenstein, 2013). The Ph.D. programs assisted the Ph.D. candidates in establishing themselves as experts in their fields. This finding is consistent with prior research, which has demonstrated that people pursue postgraduate degrees to identify themselves as industry experts (Boudreau & Lichtenstein, 2013). Participants in the survey claimed that their Ph.D. programs helped them grow in their careers. This finding is consistent with prior research, which has demonstrated that people who pursue higher degrees do so to advance their professions (Boudreau & Lichtenstein, 2013).

Participants' aspirations for applying to CSC (Chinese Scholarship Council) are to create networking and recognition with many overseas scholars. According to the findings, these networking possibilities enabled them to form contacts with professionals in their field and collaborate on research projects. These appear consistent with Diogo et al.'s [49] argument that doctoral programs improve international and students' socialization and integration processes in academic practice. This finding is consistent with prior research that has demonstrated that overseas experiences can aid in developing intercultural competence, which is a crucial ability in today's globalized environment [50,51]. They also stated that these networking opportunities allowed them to learn about job openings and receive recommendations for future possibilities.

Participants in the study also stated that they hope to use their PhD degrees to gain recognition and acknowledgment for their expertise and contributions to the area. They hoped their PhDs would allow them to establish themselves as experts in their disciplines and gain recognition from colleagues and peers. Many are keen to apply for PhD positions, particularly in foreign countries such as China. Moreno and Kollanus [52] revealed that half of the Ph.D. students choose doctoral education for personal fulfillment to receive prizes and other kinds of recognition for their research and contributions to the field.

The life expectations of PhD holders alter depending on their particular values, interests, and circumstances while pursuing a PhD. The hopes, beliefs, dreams, and assumptions people have about their future are called life expectations. One of the study's primary results is that educational instruction throughout a Ph.D. program can assist individuals in attaining their life goals. This finding is consistent with earlier research, which has demonstrated that Ph.D. programs can allow individuals to gain new skills, information, and views that can assist them in achieving their life goals [53,54,55]. Participants in the interview said that their Ph.D. programs allowed them to develop their knowledge, gain new abilities, and engage in intellectual stimulation. Furthermore, this study emphasizes transforming values, beliefs, and thoughts related to life expectations after a Ph.D. degree.

Overall, the study's findings indicate that obtaining a Ph.D. can be a transforming experience that leads to changes in life

expectations, personal growth, and professional advancement. These findings have significant implications for individuals considering getting a PhD and universities and policymakers interested in assisting PhD holders with their personal and professional growth. Finally, according to the findings, this study emphasizes the role of the degree of Ph.D. that transforms personal experiences, goals, beliefs, and values of the Ph.D. holders' life expectations.

## **6. RECOMMENDATIONS**

Various limitations to this study should be pointed out. First, the sample size needed to be bigger, limiting the findings' generalizability. Second, the study only included participants from a few nations, limiting the sample's cultural diversity. Finally, the study relied on self-reported data, which could be biased. Despite these limitations, this study offers valuable insights into the transforming path of obtaining a Ph.D. As a result, more research is required to get a more comprehensive understanding of the changing experience of getting a PhD and explore approaches to promote PhD holders' personal and professional development.

Future research should investigate the life expectations of PhD holders, such as the factors that influence their professional choices, personal objectives, and overall life satisfaction. Research could provide valuable insights into the influence of a Ph.D. degree on people's lives, as well as inspire policies and programs geared at assisting Ph.D. holders in their personal and professional growth. Furthermore, future research might look into the experiences of underrepresented groups in receiving a Ph.D., such as women, minorities, and people from low-income families. Previous research shows these groups confront distinct hurdles in reaching postgraduate degrees and academic and professional positions.

Future studies might investigate the effects of obtaining a Ph.D. on society. A previous study has demonstrated that advanced degree holders frequently contribute to producing new information, technologies, and innovations that benefit society. Understanding the broader impact of a Ph.D. degree could help shape policies and programs to boost research and innovation in various sectors. In conclusion, PhD holders' post-graduation life aspirations are complicated and multifaceted, impacted by several individual, social, and cultural elements.

Another area for future research could be the impact of obtaining a PhD on mental health and well-being. Previous research has found that graduate students and PhD holders are more likely to have mental health difficulties such as anxiety and depression. Understanding the factors that contribute to these challenges and establishing measures to increase mental health and well-being among PhD holders could be critical future study areas.

Finally, future studies might look into the effect of earning a Ph.D. on job satisfaction and work-life balance. A previous study has indicated that people who earn postgraduate degrees typically struggle to balance their job and personal lives, and they may experience significant levels of stress and burnout. Understanding the factors that contribute to these challenges and developing measures to increase job satisfaction and work-life balance among PhD holders could be critical future study areas.

#### **DISCLAIMER (ARTIFICIAL INTELLIGENCE)**

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of manuscripts.

#### **CONSENT**

As per international standards or university standards, respondents' written consent has been collected and preserved by the author(s).

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#### **COMPETING INTERESTS**

Authors have declared that no competing interests exist.

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