

Factors Affecting Student Career Development in Huazhong University of Science and Technology Wuhan, China

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Abstract

This study investigates the environmental factors, career counseling factors, genetic factors and educational factors that affect the career development of Chinese college students. The study focused on students at Huazhong University as they are at a critical stage of career decision making. A total of 402 students were selected to participate in the questionnaire survey, and the data were completed by online survey. Statistical analysis includes descriptive statistics, correlation analysis, and regression analysis.

The results show that environmental factors, career counseling factors, genetic factors and educational factors have important effects on college students' career development. According to the model of influencing factors, this study focuses on the situation of career development, and puts forward the contents and measures of college students' career development.

Keywords: Career Development; University Students; China Education

Introduction

In the current situation of competitive job market, students' career development is challenged and influenced by many factors for many increasing number of students in China, the competition in the job market is fierce, leading to greater employment pressure for university students.

Companies are looking for skills and competencies, not degrees. Therefore, it is important for university students to understand their individual skill set and the way they can effectively apply their abilities to employers.

Employment trends and needs in university have greatly changed in the recent past years, with limited opportunities in both the public and private sectors. However, the private sector also has limited opportunities and nearly 23% of graduates each year remain unemployed (Koundouno,2018).

Understanding which factors have an important impact on a student's career development can help students make more informed decisions about career choice and planning. This can help them better understand their interests, abilities and career tendencies, and choose a career path that suits them, thus improving the likelihood of employment success.

Objectives of Research

1. To study students' cognition and planning of career development in Huazhong University of Science and Technology.
2. To study the factors affecting the career development of Huazhong University of Science and Technology students.

Literature reviews

Career Development

Career development theory means a series of theoretical frameworks established by studying and discussing the development process and decision-making experienced by individuals in their career, as well as career-related factors.

Jasmine Irwin (2021) pointed career development is understood as the lifelong process that people engage in to manage learning and work as part of personally determining their future. Career guidance refers to a wide array of services that help people in managing and advancing their career development. Mujanah (2020) reviewed career development is an individual activity or undertaken activity to prepare individuals to enhance their career as planned. Career development can affect an employee's performance. Hakizimana Dieudonne (2022) believe that career development that guidance and counseling services are very important tools in human development especially during adolescent stage. Dewi Rama Niati, (2021) understand that Career development is the most important. Stated that career development is a process of increasing individual employability to achieve the desired career.

Career Counseling

Career counselling refers to Career counselling is a field of counselling which gives relevant information regarding different careers. It is a process of helping and enabling people in their career development. Career counselling helps the students to select their careers according to their choices and interests. Salim Korompot (2020) explain career counseling plays an important role in the development of individual career plans and is very useful when individuals decide to choose a career to be pursued, because to run a career requires an open mind and self-understanding about the interests and potential possessed.

Jill Faber (2022) found that career counseling is the advice or guidance focused on a person's career opportunities. Most often, this is provided in educational and work settings, both individually and in groups. Career counseling considers an individual's preferences, intelligence, skill sets, work values, and experience. J. G. (Kobus) Maree (2020) believe that career counseling as a Science, a Skill, and an Art, career counseling can be excitement-filled, creative, inspirational, and life-changing.

Career counseling is one of the most important aspects in the lives of the youth that has long-term effects on their lives. Effective career counseling can have a positive psychological impact on psychological capital and tolerance, believe that they can influence what happens around them through their efforts.

Environment

Environment factors refers to that affect career development include poverty, needs, wants, demands, and other factors that could be products of economic activities in the community. The individual may choose a career because of the needs of the society or his own personal needs.

In terms of specific environmental factors, Madison Markus (2021) pointed out that environment that the environment of the university is also something that affects how students will be impacted by the challenging transition. A university environment includes the social and cultural conditions that make up the learning as well as the working atmosphere for students. The campus environment will depend on how the individual student perceives the campus, and will differ for each student. Heesup Han (2021) summarized environmental knowledge knowledge in situation often contributes to activating one's moral obligation for taking a pro-environmental behavior.

M. Pilar Matud (2019) found that environmental factors as following:

(1) self-acceptance; (2) positive relations with others; (3) autonomy;(4) environmental mastery; (5) purpose in life; (6) personal growth.

Hereditary

The first course of career development starts with the child at the family level, and it is always the primary duty of the family to develop and internalise a sense of career in the child.

Lauren Lindstrom (2007) believe that hereditary is a broad concept that includes several demographic variables, including parents' education, occupation, and socioeconomic status. Family structural variables play a role in influencing career development. Family seems to be an especially strong predictor of later access to career opportunities and options. Sara A. Hart (2021) conclude hereditary is that "growing up with home libraries boosts adult skills". The "rearing environment", and their children's outcomes can indeed be fully due to a causal association, or importantly, can also be partly or fully. The hereditary matter for aspects of our personality, behaviors and cognitions, which then influence how we interact with our environment and how others interact with us. Matthew Charles Brett (2020) involves three key dimensions: social pressure for students to enter the system; "suction pressures" in the economic demand for manpower; and the internal logic of the system.

Education

Educational factors means that affect career development include skills, experience, knowledge, information, and other factors that could be products of teaching and learning.

Mukhtoraliyeva Mukhtasar (2022) believe that education is the dual educational system is a specialized type of education, while the student provides the opportunity to obtain theoretical knowledge directly in the educational institution, and practical skills directly in the workplace, that is, in the organization. Sharon Campbell-Phillips (2020) pointed out that education plays a critical role in our lives and it is a bit blurry when to imagine what type of society we would have without education, and how we will function as individuals.

Education and the future are inseparably intertwined. Anne-Katrin Holfelder (2019) believe Futures in education determine decisions in the present and thus can be understood as "futures for the present." José Augusto Pacheco (2020) defines education that both reflects what is now and anticipates what is next, recoding private and public responses to crises. As such, education is (post)human and has its (over)determination by beliefs and values, themselves encoded in technology.

Conceptual framework

The framework focuses on identifying the factors that influence the career development of university students. From the perspective of this framework, there are four important independent variables, which are career counseling, environmental, hereditary, educational. And the usability of the product. It is expected that these five variables will affect the career development of college students.

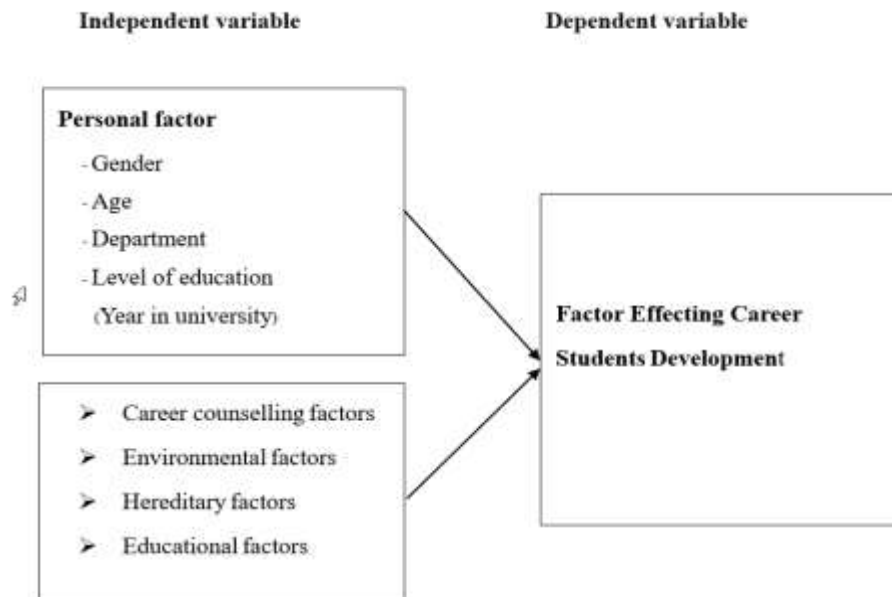


Figure 1 Research framework

Research Methodology

The data for this study was collected using an online survey conducted through the questionnaire star (wjx.cn) online survey form. The survey link was distributed across social media platforms such as WeChat, QQ. The questionnaire consisted of 41 questions, which included 3 general questions and 38 questions related to the variables of counseling, environmental, hereditary, educational. Respondents who failed the screening questions were automatically excluded from the survey. Only data from 402 valid respondents who completed all the questions in the questionnaire were used for the analysis.

The survey used a closed-ended questionnaire format, and demographic data and information about the variables were collected using Likert five-point scales. The target group for this study was students of all grades at the School of Artificial Intelligence, Huazhong University of Science and Technology. The convenience sampling approach was used to students at Huazhong University of Science and Technology. The study employed a quantitative survey as the major research approach, and computerized software was used for data analysis, including descriptive statistics and multiple linear regression.

Results

This section investigates the correlation between the independent variables, namely career counseling, environmental, hereditary, educational, and the dependent variable of Career Development. To analyze these relationships, multiple linear regression was employed. The findings of the analysis are presented below:

Table 1: Model Summary

Model	R	R square	Adjusted R square
1	0.939	0.881	0.880

a. Predictors: career counseling, environmental, hereditary, educational

b. Dependent Variable: Career Development

Table 1 shows that R square value is 0.881, this indicates that 88.1% of variation of dependent variable can be given an explanation by all four independent variables.

The result of the ANNOVA test, $F=441.425$ and significant amount is 0.000 which means that ($P<0.05$). Meanwhile, it shows that the independent variables and dependent variable are statistically associated.

Table 2: Correlation Results

		Career counseling	Environmental	Hereditary	Educational	Career Development
Career counseling	Pearson Correlation	1	.889**	.894**	.907**	.893**
	Sig. (2-tailed)		0	0	0	0
Environmental	Pearson Correlation	.889**	1	.905**	.917**	.899**
	Sig. (2-tailed)	0		0	0	0
Hereditary	Pearson Correlation	.894**	.905**	1	.910**	.895**
	Sig. (2-tailed)	0	0		0	0
Educational	Pearson Correlation	.907**	.917**	.910**	1	.922**
	Sig. (2-tailed)	0	0	0		0
Career Development	Pearson Correlation	.893**	.899**	.895**	.922**	1
	Sig. (2-tailed)	0	0	0	0	

From table 2, the correlation coefficient between Career Development and career counseling is 0.893, environmental is 0.899, hereditary is 0.895 and educational availability is

0.922 respectively and shows that they are in the positive moderate relationship with purchase intention. All factors are also significant at 0.000 less than 0.05.

Table 3: Model's Coefficients

Model	Unstandardized B	Coefficient Std. Error	Standardized Coefficients Beta	t	Sig.
(Constant)	0.141	0.066	-	2.153	0.032
career counseling	0.198	0.047	0.193	4.224	0.000
environmental	0.196	0.052	0.187	3.801	0.000
hereditary	0.173	0.048	0.172	3.577	0.000
educational	0.403	0.051	0.419	7.908	0.000

Table 3 displays the relationship between dependent variable and independent variables.

Based on the above coefficient result, it can make a regression equation as follows:

$$y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5$$

Where: y = Career Development

a = Constant

b = Coefficient

x₁ = Career counseling

x₂ = Environmental

x₃ = Hereditary

x₄ = Educational

$$\text{Career Development} = 0.141 + 0.198 \text{ Career counseling}^* + 0.196 \text{ Environmental}^* + 0.173 \text{ Hereditary}^* + 0.403 \text{ Educational}^*$$

The analysis of the model shows that career counseling, environmental, hereditary and educational all positively affect career development. The correlation coefficient reveals that educational has the strongest influence on customer purchase intention, followed by career counseling and environmental. hereditary also have some impact on customer purchase intention. Therefore, schools should guide college students to find out all the factors that affect their employment decisions, and help them find a career orientation that is more suitable for their future career development based on their personal reality.

Discussion

According to statistical analysis, the correlation coefficient between career development and career counseling is 0.893, indicating that good career counseling has a positive impact on career development, which is consistent with Salim Korompot (2020) study that career counseling plays an important role in the development of individual career plans, because to run a career requires an open mind and self-understanding about the interests and potential possessed.

Additionally, statistical analysis shows that the correlation coefficient between career development and environmental is 0.899, indicating that a good environmental has a positive impact on career development. This result is similar to Jude Obiunu (2010) research that factors such as Environmental factors such as psychology, opportunity, sociology and economy can influence the career development of college students. This means that for the university school student, issues of psychological, sociological and economics affect them in their career development.

Furthermore, the correlation coefficient between career development and hereditary is 0.895, indicating that good hereditary has a positive impact on career development. This finding is consistent with Sara A. Hart (2021) research that hereditary matter for aspects of our personality, behaviors and cognitions, which then influence how we interact with our environment and how others interact with us. This means that physical appearance and aptitude affect the career development of secondary school students. The reason is that certain careers require some specific physical appearance either in the form of size or one's capability.

Lastly, statistical analysis shows that the correlation coefficient between career development and educational is 0.922, indicating that reasonable educational has a positive impact on career development, which is similar to Sharon Campbell-Phillips (2020) conclusion that education plays a critical role in our lives, education can help us make wise decisions. Educational factors affect career development of secondary school students. This means that a student's position in school and skills acquired affect career development significantly.

Conclusion

This study investigated the impact of career counseling, environmental, hereditary and educational on career development. The data was collected from 402 students in

Huazhong University of Science and Technology, and after analysis, the findings revealed that all factors significantly influenced career development.

From all that has been discussed, it has become obvious that there are some factors which affect career development. Some of these factors include psychological factors (interest, prestige, personality and self-esteem), sociological factors (peer group, mentors, governmental policies and socio-economic status of parents), economic factors (poverty, needs, demands and wants), hereditary factors (physical appearance and aptitude) and educational factors (position of students in schools and acquired skills). Guidance counsellors therefore should be aware of these factors as they provide vocational counselling for university students. Besides the above it was also observed that career counselling is very significant for career development of university students. This is because the average university student needs help to be able to make appropriate career choice.

Suggestion

Recommendations for schools

The first is to provide a rich and diverse curriculum covering different subject areas to meet students' interests and needs and help them develop more comprehensively. Interdisciplinary courses are introduced to develop students' integrative thinking and problem-solving skills. In cooperation with enterprises and organizations, we provide practical and internship opportunities for students to help them apply their knowledge to real situations and enhance their practical operation ability. Students are encouraged to participate in social practice and volunteer activities to develop a sense of public welfare and social responsibility. Set up a career development center to provide career counseling, career guidance and recruitment services to help students better plan their career path. Career talks, industry seminars and other events are held so that students can learn about the opportunities and challenges in different career fields.

Second, establish a health psychological counseling system to provide students with mental health support to help them cope with pressure and challenges. Organize mental health education activities to enhance students' awareness and attention to mental health. Encourage interaction between teachers and students, promote good relations and communication between teachers and students, and improve teaching quality and learning experience. Set up a tutor system to provide personalized guidance and support for students. Introduce sustainable development education to cultivate students' environmental awareness

and sustainable development concept, and make positive contributions to society and the environment.

Finally, regular education and teaching assessments and student satisfaction surveys are conducted to continuously improve the quality of education and student experience based on feedback. At the same time, according to the research findings, there may be more factors that will affect the future development of students, so the school should pay more attention to the career development of students, and constantly optimize and change, so that the school can create more career development advantages for students.

Advice to students

With regard to the different factors that affect the career development of college students, here are some suggestions to help them better cope and develop their career path:

First, find an experienced career counselor or career counselor who can help understand your interests, skills, and values to guide you in making a more informed career choice. With the guidance of a counselor, conduct self-exploration to gain an in-depth understanding of your interests, strengths and goals in order to better match with the right career direction.

Second, understanding the professional background and characteristics of your family can help you better explore your own talents and strengths, but also remember that you are a unique individual. Avoid following blindly: Don't choose a career based solely on family tradition or genetics. Make decisions based on your interests and abilities.

Third, participating in internships and volunteer activities in different fields can help you better understand different career fields, gain experience, and expand your network. Building a good network of contacts and attending networking events and industry seminars can help you gain practical insights and advice about different career fields.

Fourth, during college, try to cover multiple subject areas and develop a wide range of knowledge and skills to cope with the needs of different professions. Strive to combine learning with practical application and enhance your hands-on and problem-solving skills through practical projects, extracurricular activities or internships. Career development is an ongoing process, and it is important to maintain a learning attitude and constantly improve your knowledge and skills to adapt to the changing workplace environment.

On the whole, career development is a comprehensive process, which is influenced by many factors. By actively engaging in self-exploration, seeking professional counseling, and

diverse learning and practical experiences, you can better cope with different influencing factors, make more informed career decisions, and succeed on your career path.

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