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Article

Research on Influencing Factors of College Students' Leadership: A Systematic Review of the Literature

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Abstract: Leadership is an important driving force in the process of college students' self-improvement and development, and improving college students' self-leadership is conducive to improving their comprehensive quality and ability. Based on literature research, this paper explores the factors affecting the development of college students' leadership, and then proposes a series of ways to improve college students' leadership, so as to promote the further development of college students' leadership education. A systematic literature review method was used to conduct a systematic review of 223 articles published in peer-reviewed journals from databases such as CNKI and Web of Science. The research shows that in practice, college students' leadership is defined as a kind of personal ability and implies two presuppositions: (1) Leadership is a kind of personal behavior, and individuals have the decision-making right to exercise leadership. There is no direct causal relationship between leadership behavior and organizational positions, especially position power. The above two presuppositions are caused by the fundamental changes in the connotation of leaders in the era of knowledge economy. This research will help to deeply understand the essence and influencing factors of student leadership training, and provide theoretical and decision-making reference for schools at all levels to train student leadership.

Keywords: students; leadership; student leadership; College students; College student leadership; systematic review

1. Introduction

With the advent of the era of globalization, the continuous social crises and problems, the decline of civic consciousness, the change of occupational and sub-environment and the organizational form of companies, the formation of diversified working environment and the development of leadership theories, the society calls for colleges and universities to train students with certain leadership. The research on the development of college students focuses on answering such questions as: how will the psychological condition and interpersonal relationship of college students change? What factors led to these changes; What factors in the university environment promote or hinder the growth of students; What development students will get in college. At present, five important theories have been formed around the development of college students: social theory, which discusses the content of student development, such as Chickering's "variable theory" - developing ability, managing emotions, self-management, establishing identity, mature interpersonal relationship, growth goal, self-improvement; Cognitive structure theory, which explores the ways and processes of students' intellectual and moral development; Typology theory regards the differences between people as relatively fixed characteristics; Human-environment interaction theory, the influence of the interaction between university environment and individual students on the growth of college students. These theories describe the process of student development: intellectual development, moral development, psychological development, professional development, self-development.[1]

The content of college leadership education originates from the requirements of higher education goals. The mission of modern universities is to cultivate innovative and high-quality talents who can adapt to globalization and serve the society. The comprehensive quality of their

training goals determines that they are a group of outstanding talents with ideals and vision, responsibility, knowledge, ability and influence in the future. American universities have clearly stated that the goal of college leadership education is to “cultivate new citizen leaders” (here, “new” refers to: global vision, multicultural awareness, social responsibility, sense of mission for change, and ethical consciousness; “citizen leaders” refer to those with participation awareness, community complex, and public welfare sentiment). [2] Regarding the development of college students in various dimensions of leadership, a survey on the leadership status of student leaders and non-student leaders showed that student leaders are significantly better than non-student leaders in planning ability, cooperation awareness, communication ability, and interpersonal skills, but student leaders are not better than ordinary students in every aspect (such as frustration coping ability); student leaders and non-student leaders believe that the leadership characteristics they possess are ranked first in communication ability and interpersonal skills, and ranked second in emergency response ability and ability to motivate others. [2,3]

However, due to different definitions of leadership by different researchers, although they reached similar conclusions when judging the leadership level of college students, the content of college student leadership they pointed to was different. For example, the two researchers who reached the above conclusions defined the content of leadership as: Leadership charisma, leadership influence, leadership foresight, leadership control and leadership decision-making, Interpersonal leadership, technical leadership and rational leadership.

There are many practices and studies on cultivating student leadership at home and abroad. Western countries started studying college student leadership early. Since the 1980s, the United States has launched college student leadership education activities aimed at cultivating future leaders. Many international organizations, such as the National Center for Student Leadership (NCCL) and the World Youth Elite Summit (HOBY), have effectively improved students' leadership level by holding various training and competition activities. These activities not only focus on students' organizational and management capabilities, but also focus on cultivating their sense of social responsibility and innovative spirit.

As my country's higher education enters the mass stage, the cultivation of college students' leadership has gradually received attention. The Outline of the National Medium- and Long-Term Education Reform and Development Plan (2010-2020) clearly states that efforts should be made to enhance students' sense of social responsibility to serve the country and the people, their innovative spirit of daring to explore, and their practical ability to solve problems. The cultivation of leadership is becoming one of the important missions of higher education.

The purpose of this study is to evaluate the empirical evidence on the factors that influence college students' leadership development. To provide a comprehensive overview of the current state of empirical research, this review includes quantitative, qualitative, and mixed methods studies.

2. Materials and Methods

2.1. Study Design

This review adheres to the methodological framework for conducting systematic reviews as delineated by Kitchenham and Charters [4]. The reporting follows the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) statement [5].

2.2. Eligibility Criteria

A foreign literature search was conducted in the Web of Science database, using “leadership”, “student”, “university student” and “student leader” as two groups of keywords for cross-combination search, selecting the Web of Science core collection, the document type is “article”, and the search time is up to September 15, 2024. Subsequently, supplementary searches were conducted in databases such as Elsevier, SAGE, and EBSCO, and the references of the collected documents were further searched and analyzed, resulting in a total of 1,729 documents. According to the analysis scope of this article, the above-mentioned searched documents were screened again, for example,

studies on the leadership of officials and cadres and studies on the leadership of primary and secondary school students were eliminated, and finally 137 articles entered the literature analysis library.

In addition, a Chinese literature search was conducted in CNKI, using “students”, “leadership”, “leader” and “college student leadership” as two groups of keywords, and checking synonym expansion for cross-combination search, and the paper category was selected as academic journals. The search time was up to September 15, 2024. A total of 506 relevant documents were retrieved, and the documents were eliminated according to the screening method of the above-mentioned English documents. Finally, 86 documents were included in the literature analysis library. When the author was screening Chinese literature, he found that the number of destination attachment-related studies published in core journals was relatively small, and some inspiring or highly cited related papers were published in non-core journals, so there was no limit on the indexing journal level of Chinese literature.

To ensure that only those studies relevant to the topic at hand were included, studies in management education and training were not considered unless leadership was explicitly mentioned. This is consistent with the conceptual distinction between leadership and management. To provide a comprehensive overview of strong empirical research on the topic under investigation, the review includes quantitative, qualitative, and mixed methods studies. Papers that presented anecdotal evidence, descriptive observations, or opinion polls without scientific rigor were excluded from the sample.

2.3. Literature Search and Screening

This paper uses a three-step search method to conduct domestic and foreign literature statistics. First, an initial literature search is conducted, using keywords to search the Web of Science and China National Knowledge Infrastructure (CNKI) databases. Second, keywords are used to conduct supplementary searches in other databases to fill in the gaps. Finally, by reading and sorting out the literature, a snowball search is conducted in the references of existing literature to ensure the comprehensiveness and representativeness of the literature search. After search and screening, a total of 223 domestic and foreign literature were included in the analysis. The search process is shown in Figure 1.

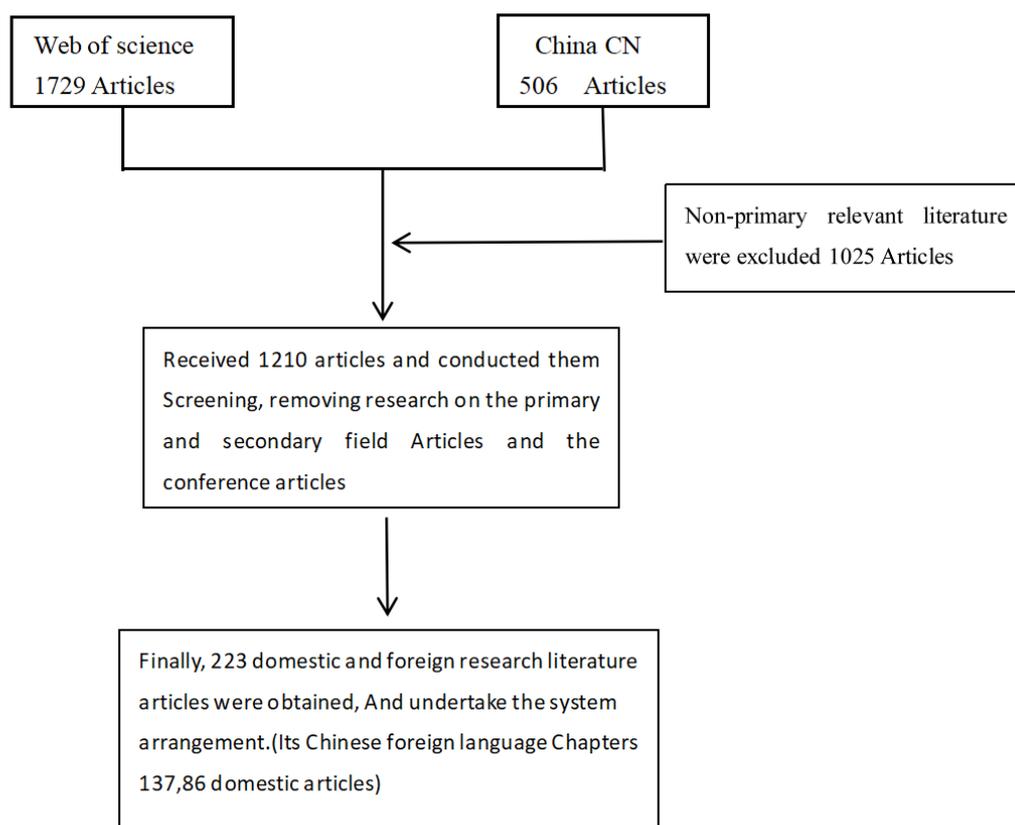


Figure 1 Flow chart of the literature search

3. Results

3.1. Literature Overview

In the 1980s, Western scholars represented by American scholars expanded the study of leadership into the field of education, thus starting the study of college student leadership. Chinese scholars have only begun to carry out more research on “college student leadership” in 2011, and have shifted from initially introducing and commenting on the research results of foreign scholars on college student leadership to in-depth discussions on various related issues of college student leadership. Judging from the publication trend, the publication volume and growth rate of research literature on student leadership have gradually increased, and the overall growth trend is accelerating. Among them, before 2013, there were few relevant research documents at home and abroad, which was in the initial stage of research. Foreign countries did a long period of exploration during this period. After 2013, there was a period of rapid growth, and the number of relevant research documents at home and abroad increased significantly. Among them, the number and growth rate of foreign documents were significantly higher than domestic ones.

After the term “leadership” first appeared in the mid-20th century, many scholars have also explained it in their respective fields. In a broad sense, leadership includes expression skills, social skills, teamwork skills, and innovation skills. The concept of “student leadership” provides a new educational perspective that emphasizes students’ subjectivity and their positive role in education. In the process of cultivating students, we should pay attention to the individual potential of students, establish an equal teacher-student relationship, and comprehensively develop students’ leadership through diversified literacy training methods. Students’ leadership includes self-cognition, self-management, self-confidence, sense of responsibility, interpersonal communication skills, scientific decision-making ability, organizational ability, execution ability, and innovation. The first four components of leadership are the internal qualities and qualities that leaders should possess, and the

last five components are the external management capabilities that leaders acquire through practical efforts. [6]

“Student leadership” is different from “student execution”. “Student leadership” emphasizes students’ initiative in teacher-student interactions and their direct influence on teachers. It highlights that students have organizational and leadership capabilities in educational practice, rather than just executing tasks under guidance. The emergence of this concept in the dimension of student relationships emphasizes the necessity and possibility of cultivating student leadership in student group life [7].

3.1.1. Research on the Concept of Leadership

Leadership In the 20th century, the business community put forward the term “leadership”. There are many different views on what leadership is among scholars at home and abroad, and there is no universal definition yet. Western academics often define “leadership” as “a cooperative process in which an individual or group influences a group to achieve common goals and realize effective and positive social changes” [4]. Under the same economic policies, social background, industrial environment and technological strength, leadership will affect the competitive differences between enterprises [5]. Leadership can also be understood as a dynamic concept [6], which is often closely related to common management terms such as vision and motivation. With the continuous deepening of research, the connotation and extension of leadership are also changing. Domestic and foreign scholars’ research on the concept of leadership mainly focuses on the following three aspects (see Table 2).

3.2. Leadership Is a Kind of Ability

Li Jinlin, Sun Feifei and others regard leadership as a comprehensive ability, believing that leadership is “the ability to motivate others to voluntarily achieve outstanding results in an organization or task” [7] (it is composed of many factors, such as values, intelligence, social skills and problem-solving ability [8]. Xi Jieren and Tao Siliang and others believe that leadership is a kind of influence [9], which is the ability to influence others through one’s own personal charm, professional qualities, values and morality, so that others voluntarily follow the leader to achieve common goals [10]. “Leadership, as the ability to change the attitudes, values, beliefs or behaviors of the target actors, can be measured by the behavior or attitudes displayed by followers” [11]. Xu Kuangdi believes that “leadership is a manifestation of comprehensive quality and ability” [12,13] “Only by conforming to the trend of social development, conforming to the interests of the majority, and promoting economic and social development with practical actions, and being honest and self-disciplined, can we produce positive influences and form leadership” [8].

3.3. Leadership Is a Process

Lu Yuanyuan and others believe that leadership is a process of creating a team atmosphere, motivating others to voluntarily make due contributions in the team, and inspiring team members to achieve success.[14] In the book *Leadership*, co-authored by James M. Kouzes and Barry Z. Posner, it is written that “leadership is a process of mobilizing people to work towards a common vision.”[9] The theoretical model of social change in the post-industrial era also believes that “leadership is a positive social change process based on clear goals, strong cooperation and unified value orientation.”

3.4. Leadership Is Not Power

There are also studies from another perspective, that is, what leadership is not. Weng Wenyan, Shi Bingxin and others believe that the meaning of modern leadership is not the traditional Chinese rule and power, but a process in which leaders lead team members to act in accordance with their values. A leader has the power to control resources to complete a task or work, and leadership traits that transcend power will lead others to follow him to achieve higher goals [10]. Therefore, some people are easily hindered by the idea of “not being in a position to do things” and wait for leaders

to decide things, thus losing the opportunity to exercise their leadership. In short, leadership refers to the ability to use one's own resources to lead others to achieve common goals in a certain occasion or group. People's understanding of leadership has evolved from the initial "innate talent of a few people" to "ability that can be stimulated through education and guidance" [11], and is regarded as the most basic ability of an individual.

Table 1. Concentrated aspects of leadership research.

Concept	Theory	researcher
	Leadership is a comprehensive ability	Li Jinlin, Sun Feifei
Leadership is an ability	Leadership is a form of influence	Xi Jieren, Tao Siliang
	Leadership is the embodiment of comprehensive quality and ability	Xu Kuangdi
Leadership is a process	Leadership is the process by which team members are motivated to succeed	Lu Yuanyuan
	Leadership is the process of mobilizing people to work towards a shared vision	James Kouzes, Barry Posner
Leadership is not power	Modern leadership is not about traditional Chinese rule and power	Weng Wenyan, Shi Bingxin, etc

Source: According to the relevant literature collation.

3.1.2. University Student Leadership

College student leadership has both common characteristics of leadership and its own uniqueness. Different scholars define the connotation of college student leadership from different perspectives (see Table 3). Compared with the concept in a universal sense, more emphasis is placed on how to analyze from the perspective of cultivating leadership.

First, college student leadership is defined as a comprehensive quality. Huang Wenhui believes that "college student leadership refers to the comprehensive qualities and abilities that college students need to possess in the process of effectively implementing leadership roles or non-leadership roles, including social responsibility, creative thinking, effective communication and problem-solving skills, etc." Secondly, college student leadership is considered to be a kind of influence. Sun Jie expanded the concept based on the characteristics of college students and proposed that college student leadership is essentially a kind of influence, the ability to influence others to achieve team goals, the ability to understand oneself, set goals, plan careers and lead self-development [12]. Therefore, college student leadership plays an important role in shaping personality, establishing correct values and cultivating a positive attitude towards life. College students are the successors and builders of the future society. The cultivation and development of college student leadership will not only help provide society with the necessary leadership talents, but also help college students better adapt to society, improve their employability, and stand out in the fiercely competitive modern society. This is also an inevitable requirement for the all-round development of college students [13].

Table 3. Related theories of leadership among college students.

Name	Theory	Content
HuangWenHui	College student leadership is a comprehensive quality	Social responsibility, creative thinking, effective communication, and the ability to solve problems

SunJie	College student leadership is a kind of influence	Know yourself, set your goals, plan your career, and lead your self-development
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Source: According to the relevant literature collation.

3.2. Study Design

3.2.1. Methods for Measuring College Students' Leadership

In the study of college student leadership, questionnaire survey is the most widely used measurement method. In 1984, American scholar Friedman proposed that researchers should use a variety of methods such as teacher evaluation, peer evaluation, and self-testing to evaluate student leadership. This was the first time that the academic community paid attention to the combination of multiple measurement methods. This laid a good foundation for the subsequent research and development of student leadership measurement methods. Friedman also pointed out that if researchers can only use one method to evaluate student leadership, student self-assessment is the most effective method [23]. Therefore, in existing research, most scholars use the self-assessment method of college students to measure their leadership, and a small number of scholars use a combination of self-assessment and peer assessment to measure college students' leadership [24]

3.2.2. Measurement Scale for College Students' Leadership

At present, there are four main scales for measuring college student leadership that are commonly used by foreign scholars. These four scales measure college student leadership from different perspectives and contain different dimensions (see Table 1). The Leadership Skills Inventory (LSI) was compiled by American scholars Townsend et al. in 1980. It is mainly used to assess adolescents' self-perception of leadership. The scale includes five dimensions, namely teamwork, self-understanding, communication, decision-making and leadership, with a total of 21 measurement questions [14]. The Social Responsibility Leadership Scale (SRLS) was compiled by American scholar Tyree in 1998. It mainly assesses the development process of student leadership. The scale includes eight dimensions, namely self-cognition, consistency, commitment, cooperation, common goals, polite competition, civic responsibility and change, with a total of 105 measurement questions. [26] The Student Leadership Practice Inventory (SLPI) was developed by American scholars Posner and Kouzes in 2005. It is mainly used to evaluate the effectiveness of college students' leadership. The scale includes five dimensions: leading by example, shared vision, challenging the status quo, enabling others to act, and inspiring people. It has a total of 30 measurement questions. [15] The Emotional Intelligence Leadership Scale (EILS-I) was developed by American scholars Shankman and Allen in 2008. It is mainly used to evaluate college students' self-reported emotional intelligence leadership behavior. The scale includes three dimensions: other cognition, self-cognition, and situational cognition. It has a total of 24 measurement questions [16].

Compared with foreign scholars, Chinese scholars started their research on college students' leadership relatively late. Most domestic scholars mainly use scales developed by foreign scholars for empirical research. Their research results show that the Leadership Skills Scale[17], the Social Responsibility Leadership Scale[18], the Student Leadership Practice Scale[19] and the College Student Emotional Intelligence Leadership Scale[20] also have high reliability and validity in the Chinese context. In view of the different cultures between China and the West, some domestic scholars have begun to try to develop college student leadership measurement scales suitable for the Chinese cultural background. Wen Li et al. developed a college student leadership measurement scale, including four dimensions: social practice, learning ability, problem solving and emotional intelligence[21]. Zhu Jun and Zeng Qingsong developed a youth student leadership measurement scale, including four dimensions: self-management, interpersonal communication, team organization and public value[22]. Although domestic scholars have initially developed measurement scales for college students' leadership in my country, the reliability and validity of these scales still need further empirical testing. In summary, domestic and foreign scholars have not yet reached a consensus on

the measurement of college students' leadership. Foreign scholars have developed relatively mature measurement scales for college students' leadership and have been widely used in China. Since Chinese scholars started their research on college students' leadership relatively late, they have not yet developed a mature and authoritative measurement scale. Therefore, the measurement of college students' leadership in my country still needs further in-depth research.

In my country, the research method of college students' leadership is mostly based on questionnaire survey. In order to deeply explore the cultivation mechanism of teamwork and leadership in college basketball training, Wang Shansong randomly selected 141 members of college basketball teams for questionnaire survey, providing theoretical support and practical guidance for improving the quality and effect of training. [23] Li Xiayan, Yang Yonggui, and Tan Liling used the self-compiled "College Student Leadership Questionnaire" to measure college students' leadership. The questionnaire consists of 35 questions in five dimensions: 5 questions on building vision, 8 questions on strategic decision-making, 9 questions on work practice, 8 questions on personality influence, and 5 questions on interpersonal communication. The content of the questionnaire is to ask the extent to which the leader of a team of college students has certain leadership traits or abilities. The Likert 5-point scoring method is used, from 1 to 5, which are "very weak", "relatively weak", "average level", "relatively strong", and "very strong". The higher the score, the stronger the college students' leadership. [24]

Table 2. Leadership measurement scale of foreign College Students.

Scale name	Scale developer	Scale dimension quantity	Scale dimension content	Measurement of the topic quantity
LSL	Townsend etc.	5	Teamwork, self-understanding, communication, decision-making, and leadership	21
SRLS	Tyree	8	Self-perception, consistency, commitment, cooperation, common goals, competition with courtesy, civic responsibility, change	105
SLPI	Posner , Kouzes	5	Lead by example, share a common vision, challenge the status quo, make everyone act, and inspire people	30
EILS-I	Shankman、Allen	3	Other cognition, self-cognition, situational cognition	24

Source: According to the relevant literature collation.

3.3. Influencing Factors

3.3.1. Individual Factors Are Important Factors Affecting College Students' Leadership Development

In the development of Chinese college students' social responsibility leadership, gender and political affiliation are more important influencing factors among individual factors, while place of origin and family structure are not important influencing factors. Although in the process of difference analysis, the social responsibility leadership of college students from urban places is better than that of college students from rural places, it is not a key factor affecting the development of college students' social responsibility leadership. From the perspective of the practice of college students' social responsibility leadership education, in the process of carrying out college students' social responsibility leadership education, it is unlikely that we will separate and train college students from different places of origin. For male and female students and college students with different political affiliations, we are more likely to carry out targeted training. This research result

undoubtedly has important practical significance for the development of college students' leadership education.

3.3.2. Participation in student Organizations Can Effectively Promote the Development of College Students' Leadership

Two factors, participation in student organizations and holding leadership positions in student organizations, have a significant positive impact on the development of socially responsible leadership among Chinese college students. From the perspective of the practice of socially responsible leadership education for college students, in the process of developing socially responsible leadership education for college students, college students should be encouraged to participate in student organizations and provide more support for the development of student organizations; College students take up leadership positions in student organizations, creating more leadership positions for college students, allowing more universities to have the opportunity to hold leadership positions, and improving the socially responsible leadership of college students in practice.

3.3.3. Social Participation Has a Positive Impact on the Development of College Students' Leadership

Social participation has a significant impact on the development of socially responsible leadership among Chinese college students. Participating in volunteer activities, social practice activities and part-time jobs during school has a positive impact on the development of socially responsible leadership among Chinese college students. From the perspective of the practice of socially responsible leadership education for college students, in the process of carrying out social responsible leadership education for college students, college students should be encouraged to participate in volunteer activities, social practice activities and part-time jobs, so as to create more opportunities for college students to participate Volunteer activities, social practice activities and part-time job opportunities improve college students' socially responsible leadership through social participation. [25]

3.3.4. The Impact of Parental Parenting Style, Activity Participation, and Self-Concept Factors on College Students' Leadership

Parents' parenting style, activity participation, and self-concept have a huge impact on students' leadership ability. If parents intervene too much in their children's lives, the children will not have independent decision-making space, which is not conducive to the development of students' leadership. On the contrary, if parents give their children more independent time and space and let them handle things on their own, this will be beneficial to the development of students' leadership. From the perspective of current social development, more and more young people will not intervene too much in their children's lives. When these children become college students, they are likely to have good personal qualities. Compared with their parents, they will also have a great improvement in execution and appeal [26].

3.3.5. The Intervention of School Social Workers Can Help Cultivate College Students' Leadership

Role-playing and scenario-based exercises, establishing mentoring systems, and promoting cross-cultural leadership development[27].Through a series of means, combined with scientific improvement methods, students' participation and enthusiasm in leadership training activities can be increased, thereby helping to improve college students' leadership. In addition, the intervention of school social workers can also make the training methods closer to social needs.

3.3.6. Improving College Students' Leadership through Home-School Partnerships

School-family partnerships: refers to the shared responsibility of children's growth by educators and parents (and the community). It includes six types of practices: being a good parent, communicating with each other, volunteering, learning at home, participating in decision-making,

and working with the community. It is an integral part of the modern school system [28]. In the process of school-family partnerships, the joint efforts of parents and teachers can help students develop leadership.

3.3.7. Different Training Methods of Colleges and Universities Have a Certain Impact on College Students' Leadership

Research shows that college students with high leadership skills are significantly more likely to be successful after graduation compared to their peers. [29] Therefore, improving the leadership of college students also improves students' social adaptability and can help students develop more comprehensively. All colleges and universities need to further clarify the concept of cultivating first-class talents, implement general education platforms, improve leadership curriculum systems, broaden educational fields, integrate teacher resources, enrich off-campus practical education forms, and promote the international development of leadership education. Explore the way to gain coupling between the two. [30] The implementation of young leadership models, reward systems, risk-taking, happiness strategies, and growth mindset can cultivate students' leadership by creating aspirations, realizing dreams, and shaping character. [31]

Discussion

4.1. Do Not Stick to Traditional Education Methods, and Use Emerging Education Methods to Cultivate Students' Leadership

At present, various education methods are developing very rapidly. In terms of cultivating students' leadership, various outdoor sports, camp development, and experiential education schools have achieved great results. [32] However, scholars from all walks of life have conducted relatively few studies in this direction, and there is a broad research prospect.

4.2 Artificial Intelligence Products Have a Great Impact on the Life and Study of College Students

Staying at home has become the "standard" of life for many students, and this lifestyle has brought many impacts on the various qualities of college students [36]. However, there are few studies on the impact of artificial intelligence on student leadership. With the development of the Internet, WeChat chats and video calls have become the mainstream of life, and with it comes the emergence of more and more "socially anxious" college students, which has a great impact on the cultivation of college students' leadership.

4.3 Existing Research on College Students' Leadership Mainly Adopts the Method of Cross-Sectional Research, and the Research results cannot infer the causal relationship between variables. In the future, researchers can use longitudinal tracking research, experimental research and other methods to more accurately determine the causal relationship between antecedent variables and college students' leadership, and between college students' leadership and outcome variables.

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