

Social Ecology Model of Factors Influencing Leadership Ability of Graduates in Zhengzhou City

Ziqian Peng^{1,2,*}, Ali Khatibi², Jacqueline Tham²

¹Shangqiu Medical College, No.666, Yingbin Avenue, Shangqiu City, Henan Province, China

²Postgraduate Centre, Management and Science University, University Drive, Off Persiaran Olahraga, Section 13, 40100 Shah Alam, Malaysia

*Author to whom correspondence should be addressed.

Abstract: *This study aims to use social ecology theory to guide the role of graduates in enhancing leadership ability in higher education and the positive impact of social ecology on students' self-efficacy. This study adopts a quantitative research methodology and uses structural equation modelling AMOS to test the hypotheses. A questionnaire was administered to students in 86 colleges and universities in Zhengzhou City to obtain data on the students' leadership development in colleges and universities as well as in their own surroundings prior to graduation.*

Keywords: Social ecology; Self-efficacy; Leadership; Graduates.

Cited as: Peng, Z., Khatibi, A., & Tham, J. (2025). Social Ecology Model of Factors Influencing Leadership Ability of Graduates in Zhengzhou City. *Journal of Theory and Practice in Education and Innovation*, 2(3), 22–32. Retrieved from <https://woodyinternational.com/index.php/jtpei/article/view/269>

1. Background of the Study

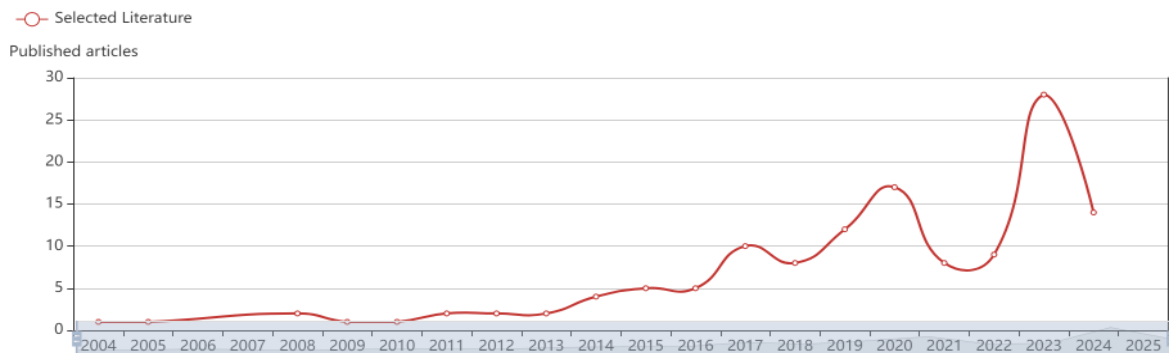


Figure 1: China Knowledge Search Keywords Leadership student Literature Quantity

College student leadership is the positive influence that college students have in the specific environment of the university through the surrounding groups, and can lay the cornerstone of leadership for the healthy and sustainable growth of their future careers. The leadership of college students is the result of their own efforts and the shaping of the environment, both inside and outside the two major factors (Yang, 2020).

Students are one of the main navigators of the future development of society, and they themselves should pay more attention to improving their core literacy as well as comprehensive literacy. Strengthening of leadership skills not only contributes to the overall quality of students, but also contributes to the rapid socio-economic development of the society (Guo et al., 2021).

Leadership is seen as a pillar of organisational success. Leaders significantly improve the ability of their followers to deliver benefits to the organization (Toker, 2022).

The changes that have taken place in society concern all aspects of life and place high demands on the knowledge, personal qualities and, above all, the professional training of each and every individual. More than ever, young people more than ever, young people are faced with the difficult task of not only updating and deepening their knowledge and mastering the latest scientific and technological achievements, but also of preparing themselves to become competitive specialists with a certain level of competitiveness. To make themselves competitive experts with certain leadership qualities (Saytbekova, 2021).

2. Current Situation of the Study

2.1 Current Status of Research in Social Ecology

In Social Ecology in Holistic Leadership, in the context of social ecology, whose roots can be traced back to the mid-1950s and further developed over the next 60 years - can be applied to the study of leadership and its applications. Social ecology can be described as a holistic way of working that seeks to create a balance between organisations and people. The fundamental aim of social-ecological thinking is to develop individuals who are able to take a free and proactive approach to ensuring sustainable/healthy communities, based on socially responsible actions within the internal life of the organisation and within the local community (Lemcke, 2021).

The interpersonal dimension of influence on leadership was found to be the most dominant dimension through a socio-ecological modelling study, indicating that middle-level leaders are both classroom teachers and team leaders. The use of the model facilitated the development and modification of professional training programmes for middle-level school leaders. Social ecology was also helpful in designing strategies to address ethical challenges and strengthen ethical leadership in schools (Iftach & Shapira-Lishchinsky, 2023).

An ecological perspective on leadership - one that looks at the interaction of behaviour, people and the environment - helps to provide new insights into what constitutes effective leadership. Systems cognition is a powerful tool for students to use to see the connections that are occurring within and outside of the university and to realise that these newfound connections have an impact on the work they do and the effectiveness of their leadership. A systems perspective on leadership requires many people working together in different places, at different levels, and in multiple dimensions of the system, an effort that crosses both physical and virtual boundaries. Leadership systems involve interdependent elements of leading, following, and environmental contexts, both near and distant (Kuk & Banning, 2023).

Since it was proposed, social ecology theory has been applied to research in various fields, and in each field, it has been brought into the researchers' own research with scenarios, and the research expectation is consistent with the research results, providing theoretical guidance for a large number of studies (Zhu & Liu, 2022).

The socio-ecological framework explains how different socio-ecological levels (i.e., individual, interpersonal, institutional, community, political) and systems (i.e., micro, meso, appearance, macro, time) interact (Teare & Taks, 2024).

Social ecology theory holds that individual behavior is formed in interactions between individuals and their surroundings, emphasizing the development of individual behavior. It is nested within a series of interacting environmental systems. The system interacts with the individual and influences the development of the individual's behavior. As a growing individual, their behavior development is influenced by many surrounding factors including society, family, school, etc (Song, 2021).

There are factors forming the scientific research dilemma of young PE teachers at the policy level, the community level, the school level, the interpersonal level and the individual level, and these factors play a role from far to near (Luo & Wang, 2023).

2.2 Current Status of the Research on Self-efficacy

The purpose of exploring self-efficacy and leadership is twofold. Reviewing the research on leadership self-efficacy in the past 25 years, the articles all show that there is an inseparable relationship between self-efficacy and leader effectiveness standards, as well as the influence of individual and environment on self-efficacy (Dwyer, 2019).

Supportive environments can amplify the impact of individual self-beliefs on collective innovation, help harness the power of servant leadership to increase innovation self-efficacy, and ultimately improve team innovation performance (Ren & Shen, 2024).

The application of self-efficacy sensing to college students' digital leadership and cross-cultural competence shows that students tend to show greater confidence in their ability to complete challenging tasks and achieve expected results, thus improving their employability, and the combination of these skills can strongly embody beliefs about self-efficacy (Zhan et al., 2024).

There are many existing motivation theories, which can explain why individuals perform or insist on certain behaviors, mainly including four dimensions: Personal factors mainly include the ego dimension, including expectation and self-efficacy. The social dimension includes modeling and comparison. Cognitive dimensions include self-regulation. The task dimension includes goals and perceived costs and benefits. Motivation is the result of the interaction between people and the internal and external factors of the environment, and by focusing on the characteristics of individual motivation, understanding of the situation and control of the goal, we can more clearly understand the direct decisions people make in daily life (Hattie et al., 2020).

Motivation is the process of goal-directed activity, in which motivating and sustaining motivational processes are intrinsic personal influences that lead to choice, persistence, effort, achievement, and environmental regulation. Motivation has been a prominent feature of social cognitive theory from the earliest studies to the current concepts involved. The most critical internal motivational processes of motivation include self-evaluation of goals and progress, social comparison, self-efficacy, attribution and self-regulation, and outcome expectations. Key issues facing motivation theory include cultural diversity and the long-term effectiveness of interventions (Schunk, & DiBenedetto, 2020).

Multiple theorists argue that motivation is bidirectional and dynamic, that the influence of environment on motivation is critical, and that motivational beliefs are "layered" rather than isolated and specific. Distinctions include the scope or scope of theories, structures included in some theories and not in others, the breadth of antecedents that influence motivation, and the influence of certain processes (i.e., social comparisons) on motivational beliefs (Wigfield, 2020).

Students' self-determination motivation (acting out of values of interest, curiosity, and perseverance) is associated with higher academic well-being, perseverance, and achievement. Self-determination theory states that self-determination motivation depends on the satisfaction of three psychological needs (relationships, competence, and autonomy), which in turn are facilitated through need-supporting behaviors of others (Bureau, 2022).

The degree of motivation and self-determination of students is crucial to academic performance. When the learning environment supports the basic psychological needs of autonomy, relevance, and competence, autonomous learning motivation is promoted. This correlates with higher perceived learning performance (Yu & Levesque-Bristol, 2020).

2.3 Current State of Research on Graduate Leadership Ability

At present, leadership education for college students in colleges and universities still has some deficiencies in theoretical research and education system, such as low motivation, insufficient driving force, low coverage, and no combination with other education (Niu et al., 2021).

For a long time, leadership training for college students has been an important measure for Western universities to train future social elites and leaders of various industries. Many well-known universities in China are actively cultivating college students' leadership, and have achieved certain results. However, compared with western universities, there are still some problems such as training goal bias, small coverage of training objects, single training form, imperfect curriculum system, emphasis on leadership skills training, and lack of value education (Wang et al., 2022).

3. Problem Statement

Since the research on self-leadership in China has been carried out for a relatively short period of time and people's

understanding of it is not deep enough, there are still some shortcomings in self-leadership education for college students. First of all, education is not given enough attention, and its overall development is still in the primary stage, the distribution of related educational activities is fragmented, and its scientific and systematic nature needs to be improved. Secondly, the education ecosystem has not been perfected, and the forms of self-leadership education for college students need to be further enriched (Chao et al., 2024).

According to data previously released by China's Ministry of Education, the number of college graduates in 2022 will hit a new record high, an increase of 1.67 million over 2021 (Liu et al., 2024).

Zhengzhou city universities should be in order to effectively solve the employment difficulties of college students, alleviate the current severe employment pressure, the government, universities, society should actively explore solutions to the countermeasures (Yan, 2020).

The perceptions of higher education institutions, employers and policymakers about the employability of students is something that needs to be looked at (Cheng et al., 2022).

Existence of weak competence in graduate leadership in universities in Zhengzhou City, which does not meet the needs of graduates to enter the position as well as the needs of graduates for self-leadership. Through self-efficacy as a mediating effect in the social ecology theory to study the impact on graduate leadership ability belongs to the gap.

The current existence of related research is mostly qualitative research, which can not through a large amount of data to show the reasons for the weak leadership of graduates. This study explains the causes of weak leadership among college students through a new theoretical framework, a new variable framework, and a new research group with a quantitative research method of investigation, in order to make efforts to provide research value for studies related to leadership development among college students.

3.1 Current Graduate Leadership Ability Unable to Satisfy Multifaceted Demand

Despite the growing interest in research on the employability and career development of international graduates, most studies have focused on their employability in developed countries; little is known about their employability in developing countries such as China (Dai & Pham, 2024).

As an emerging economic powerhouse, China has a huge job market. However, many Chinese graduates face enormous employment pressure upon graduation as they realise that a university degree is no longer the 'golden key' to employment (Song & Xu, 2024).

Graduates feel unprepared for the world of work due to high unemployment, while employers perceive graduates as lacking core employability soft skills. Academics, for their part, have made efforts to integrate employability skills into their curricula. In addition, globalization, social and workplace diversity require graduates with social and humanistic values (Mtawa & Wilson-Strydom, 2021).

Soft skills include teamwork, collaboration, leadership, problem solving, critical thinking, interpersonal communication, and conflict resolution, with leadership and interpersonal relationships topping the list. To address this issue, there needs to be a sustained synergy between employers and Higher Education Institutions (HEIs) to guide students in the development and acquisition of these essential skills. This effort is expected to improve student employability, increase employer outcomes, and ultimately close the soft skills gap nationwide (Karimi & Piña, 2021).

Various leadership techniques and styles have evolved into entrepreneurial practices, and appropriate leadership styles should be sought to enhance student leadership (Abdul&Zainal,2022).

College students have different backgrounds and different experiences. This diversity is often considered for performance in higher education. However, little attention has been paid to its importance for employability (Eimer & Bohndick, 2021).

There are four main categories of graduate employability attributes: personal, interpersonal, workplace and applied knowledge attributes. Personal attributes refer to the unique makeup of an individual that enables them to succeed

in all aspects of life and sets the stage for the way all other attributes are applied. Interpersonal attributes determine the ability of new graduates to communicate or interact well with other people (Steurer et al., 2022).

Academic leadership was unable to promote a sense of professional development among graduates because of lack of adequate efforts in skills training. Their own efforts were also found to be insufficient due to various reasons such as lack of adequate career awareness, limited career opportunities and unfavourable working environment in the country (Bhusal, 2022).

More graduates are entering the labour market than in previous years, knowledge comprehension and learning ability, self-management ability, emotional intelligence, general skills, professional ability, and career planning ability are important factors of college students should master (Jiang et al., 2023).

Interpersonal skills bring a dimension to customer service, communication and global interaction with prospects, making working with organizations more attractive. Data collected from interviews found that employers want the graduates they hire to demonstrate initiative, communication skills, leadership and interpersonal skills (Heimbach, 2024).

The mismatch between the skills and qualities of graduates and the needs of industry has always been a challenge for higher education institutions. As a result, higher education institutions are constantly reviewing their programmes to meet the relevant human resource needs. The skills preferred by employers are leadership, communication and interpersonal skills (Briones et al., 2021).

Employers and human resource professionals may want to provide servant leadership training to new hires so they can better integrate into the company culture. Undergraduate students who exhibit servant leadership traits are more likely to have a positive view of their employability (Yue et al., 2024).

3.2 University Climate Hardly Sufficient for Graduate Leadership Ability

The current leadership status of college students in China is not optimistic. In a survey of some colleges and universities, it was found that nearly 70% of the students believed that "not everyone needs leadership", and another survey analysed that students in some institutions expected to learn applied leadership education, but the schools failed to provide the corresponding educational resources, and many of the students were not interested in the There are serious cognitive biases in the understanding of leadership, and the current leadership performance of some college students in practice behaviour is relatively insufficient (Pan et al., 2023)

With the popularization of higher education and the promotion of college enrollment expansion, the number of college graduates has increased sharply. At the same time, The continuous upgrading of the industrial structure of modern society has put forward more severe requirements on the employability of college students, resulting in the imbalance of supply and demand in the labor market. The key to solving the employment problem lies in improving the employability of college students. Course offering, course teaching and association activities are positively correlated with the employability of college students, among which course teaching and association activities are the most critical factors affecting the employability of college students (Zhang et al., 2022).

The opportunity to develop graduate traits that go beyond subject expertise is an essential part of any degree programme, and students should develop these traits during their tertiary education. Graduate traits can be seen as advanced skills and qualities that go beyond technical knowledge, which enable higher education institutions to produce more employable graduates. However, there are significant challenges in developing these skills and qualities (Gamage et al., 2023).

By developing the skills and productivity of their graduates, institutions of higher learning play an important role not only in favour of the employment of university students, but also in the economic growth of any country. By examining the skills employers look for before hiring graduates. These skills are categorised into four dimensions which include leadership skills and team/group work. Employers look for interpersonal skills and problem-solving skills before making hiring decisions. Educational institutions need to improve these skills in the classroom by emphasising teamwork (Baird & Parayitam, 2019).

Graduates have a negative bias in their perception of their skill level compared to job requirements, they believe that the level of competence required is higher than it actually is, and the main gaps correspond to working under

pressure, problem-solving, decision-making, initiative, motivation, organization, interpreting results, adaptability, working autonomously and critically, which graduates seem to be aware of to some extent. Because they believe that the curriculum does not equip them with most of the competencies needed for an appropriate level (Pujol-Jover et al., 2022).

Difficulty in the employment of graduates has become a common problem and an increasingly serious problem in the development of society. The reason is that there is an obvious gap between the professional knowledge, technical ability and comprehensive quality of college students and the needs of employers. The optimisation of talent training objectives and strategies during the university period has an important role in improving the employability of graduates, and colleges and universities should formulate training objectives and strategies according to the needs of employers, and give students the necessary employment guidance and other countermeasures in a timely manner (Chen et al., 2024).

Leadership, teamwork and communication skills are positively correlated, with the leadership skills possessed by graduates having the greatest impact on employment opportunities. This is particularly true with regard to planning various student skill enhancement programmes to increase graduate employability. However, according to Abdullah et al. (2021), universities should focus on leadership, teamwork and communication skills in their teaching and learning process.

Leadership development is an explicit or implicit outcome of many educational programmes, yet the form and specifics of the curriculum and instruction that support leadership development are often somewhat unclear. Whether leadership development naturally emerges from participation in such activities, or whether it can and should be developed through specific learning experiences that directly target leadership skills-or both. Academic competence and achievement appear to be important in adult perceptions of youth leadership (Little & Kearney, 2021).

Some colleges and universities have neglected the practical needs of college students in carrying out leadership education, and have not combined leadership education with professional education and career development planning, which has resulted in college students' unrealistic misunderstanding of leadership education, thus reducing their sense of participation and access. (Tang et al., 2023)

Teachers want their professional students to be leaders in their fields; however, there is a lack of formal extracurricular education to prepare them for leadership roles (Lubker & Petrusa, 2022).

Interactive and communicative processes during the learning process are key factors in the development of leadership skills. Further research is needed to explore more about the potential of learning to develop leadership skills in graduates and to identify effective strategies for developing graduate leadership. Overall, the importance of integrating leadership development into the educational curriculum and the need for continuous professional development for teachers to effectively promote leadership skills development (Hasanah et al., 2023).

Educational leaders need to recognise the impact of their own leadership behaviour on the organizational climate of the school, contributing to the creation of a learning climate for school development. Increasing pressures on all students require educational leaders to meet higher standards at the national, state, and local levels. Teachers and headmasters are increasingly being asked to improve school climate, and when teacher and headmaster leadership behaviours meet the standards, they impact their organizations. It can indirectly enhance the leadership development that college students desire (Wang & O. Dapat, 2023).

It is important to grasp the specific methods used to develop leadership identity in college students within the context of academic programmes. Focus on leaders and leadership development through curricular contexts such as majors, minors, and certificates, as well as specific curricular activities used to engage students in the development of leadership identity (Odom & Dunn, 2023).

There is also growing interest in the competencies that students should acquire to become sustainability leaders. However, little is known about which sustainability leadership competencies are critical to effecting change, or how curricula respond to these competencies. University programmes vary in the extent to which they address leadership competencies, but the programmes are not consistent in their related cognitive processing expectations. Their programmes should be reviewed and ensure that students, regardless of specialisation, have the opportunity to graduate with the knowledge, skills and mindsets to influence change (Killion et al., 2022).

The higher education institutions are failing to transform the younger generation by developing their abilities, skills, values and behaviours to adapt them to the world of work. Some of the factors contributing to this include poor learning environments, a lack of staff with industry experience and an over-reliance on teaching theoretical content. These findings have important implications for repositioning higher education course developers to meet the needs of industry and society (Okolie et al., 2020).

Educational curricula fail to provide the competencies needed to ensure a smooth transition from university to the job market, while study programme initiatives related to active learning and internships have an impact on this transition. Attention should be paid to the specific characteristics of academic programmes, which should be taken into account in the design of curricula in order to improve the employability of graduates and accelerate their entry into the labour market (Perez-Encinas & Berbegal-Mirabent, 2023).

4. Research Objectives

The main objective of this study is to determine the factors influence self -efficacy on graduate leadership ability among university graduate in zhengzhou city. In order to gain a clearer understanding of how to influence college student leadership, the specific objective of this paper are the following 4 points.

- 1) To determining the impact of personal preference, interpersonal relationship, university programme, community atmosphere, policy formulation on enhancing among graduate leadership ability.
- 2) To evaluate the impact of personal preference, interpersonal relationship, university programme, community atmosphere, policy formulation on among graduate students' self-efficacy.
- 3) To examine the impact of self-efficacy on enhancing among graduate leadership ability.
- 4) To assess the effect of the mediating variable self-efficacy on the impact of personal preferences, interpersonal relationships, university curricula, community climate, and policy development on graduate student leadership.

5. Research Questions

- 1) What are the effects of personal preference, interpersonal relationship, university programme, community atmosphere, policy formulation on improving among graduate student leadership ability?
- 2) What are the effects of personal preference, interpersonal relationship, university programme, community atmosphere, policy formulation thinking on among graduate students' self-efficacy?
- 3) What is the effect of self-efficacy on improving among graduate students leadership ability?
- 4) What is the influence of the mediating variable self-efficacy on personal preferences, interpersonal relationships, university curricula, community climate, and policy development on graduate student leadership?

6. Significance of Study

This chapter mainly expounds the theoretical significance and practical significance of the study, aiming to emphasize the important role of social ecology in exploring the motivational factors affecting graduate leadership, in order to provide a solid theoretical basis for promoting graduate leadership behavior. Author hope that through this study, Author can deeply explore and understand the various motivational factors that affect the leadership ability of graduates, so as to provide a strong theoretical support for the improvement of the leadership ability of graduates.

In practice, this study hopes to put forward some practical reference suggestions to improve the leadership of graduates. Author hope that through these suggestions, we can help graduates better understand and grasp the training of leadership ability, so as to play a better leadership role in the future work and life. At the same time, This study hopes to provide some reference value for educators, business managers and relevant policy makers to work together to promote the development of graduate leadership skills.

In conclusion, this chapter aims to emphasize the theoretical and practical value of this research, hoping to contribute to the development of the field of social ecology through theoretical research and practical exploration, and also provide strong support for the improvement of graduates' leadership ability. On this basis, we hope that more researchers, educators and practitioners will pay attention to and participate in the research in this field, and work together for the improvement of the leadership ability of our graduates.

6.1 Theoretical Significance

Based on self-efficacy theory, this study systematically analyses and empirically investigates the multidimensional influencing factors of graduate leadership, aiming to explore in depth which factors have substantial influence on the shaping and development of graduate leadership in the context of social ecology as well as self-efficacy theory. Currently, there is still a lack of theoretical discussion on the mechanism of graduate leadership formation mediated by self-efficacy from the perspective of social ecology. This study is committed to filling this theoretical gap, which is an important theoretical innovation.

Through this study, it not only theoretically deepens and expands the formation mechanism of graduate leadership, but also provides novel theoretical perspectives and ideas for the enrichment and development of leadership theory, and provides a solid theoretical foundation and scientific guidance basis. We hope that these theoretical results can help educators, business managers and policy makers to understand the nature and cultivation path of postgraduate leadership more deeply, and then guide their practical activities in talent cultivation, organisational management and policy making, providing strong theoretical support for the sustainable development and progress of society.

6.2 Practical Significance

Based on the social ecological theory model, this study systematically divides the factors that affect the leadership of college graduates. We use detailed statistical methods to deeply analyze these hierarchical factors in order to fully reveal how they affect the leadership development of college graduates.

This research is not limited to the individual characteristics of graduates, such as character building, ability training and knowledge improvement, but also extends to the complex social environment in which they are exposed, such as the influence of family education, school education and social relationships. In addition, we pay special attention to graduates' psychological states and coping strategies in the workplace challenges, as well as their positioning and behavior in the team.

Through the careful interpretation of these research results, we can provide practical guidelines on how to effectively improve the leadership of college graduates. These strategies and suggestions will directly help graduates to play a better leadership role in the workplace, and thus contribute more to the prosperity and progress of the society.

References

- [1] Lemcke, E. (2021). Social Ecology in Holistic Leadership. Iftach, G., & Shapira-Lishchinsky, O. (2023). Ethical dilemmas among mid-level school leaders through role-play simulations: Developing a social-ecological approach. *Educational Management Administration & Leadership*, 51(3), 594-615.
- [2] Kuk, L., & Banning, J. H. (2023). Student affairs leadership: Defining the role through an ecological framework. Taylor & Francis.
- [3] Zhu, J., Liu, P. (2022). Research Dilemma and Cracking of Young Teachers in Physical Education Discipline - Based on Social Ecology Theory. *Sports Science Research* (05), 82-87. doi:10.19715/j.tiyukexueyanjiu.2022.05.012.
- [4] Teare, G., & Taks, M. (2024). A socioecological framework for leveraging sport events for youth sport. In *Research Handbook on Major Sporting Events* (pp. 740-757). Edward Elgar Publishing.
- [5] Song, W., Wang, W., & Yin, X. (2021). RESEARCH ON INFLUENCING FACTORS OF ADOLESCENTS' SPORTS HEALTH BEHAVIORS IN SOCIAL ECOLOGY. *Revista Brasileira de Medicina do Esporte*, 27, 434-439.
- [6] Luo J., Wang S. (2023). The reality dilemma and promotion path of physical activity promotion for the elderly in China under the perspective of social ecology theory. *Fujian Sports Science and Technology* (01), 54-59.

- [7] Dwyer, L.P. (2019). Leadership self-efficacy: review and leader development implications. *Journal of Management Development*.
- [8] Ren, L., & Shen, H. (2024). The relationship between servant leadership and team innovation performance: Mediating effect of self-efficacy. *Heliyon*, 10(6).
- [9] Zhan, H., Cheng, K. M., Wijaya, L., & Zhang, S. (2024). Investigating the mediating role of self-efficacy between digital leadership capability, intercultural competence, and employability among working undergraduates. *Higher Education, Skills and Work-Based Learning*.
- [10] Hattie, J., Hodis, F. A., & Kang, S. H. (2020). Theories of motivation: Integration and ways forward. *Contemporary Educational Psychology*, 61, 101865.
- [11] Schunk, D. H., & DiBenedetto, M. K. (2020). Motivation and social cognitive theory. *Contemporary educational psychology*, 60, 101832.
- [12] Wigfield, A., & Koenka, A. C. (2020). Where do we go from here in academic motivation theory and research? Some reflections and recommendations for future work. *Contemporary Educational Psychology*, 61, 101872.
- [13] Bureau, J. S., Howard, J. L., Chong, J. X., & Guay, F. (2022). Pathways to student motivation: A meta-analysis of antecedents of autonomous and controlled motivations. *Review of Educational Research*, 92(1), 46-72.
- [14] Yu, S., & Levesque-Bristol, C. (2020). A cross-classified path analysis of the self-determination theory model on the situational, individual and classroom levels in college education. *Contemporary Educational Psychology*, 61, 101857.
- [15] Niu, Z. L. (2021). Research on leadership education of college students in the new era under the background of scientific and technological innovation. *Journal of the Party School of Zhengzhou Municipal Committee of the Communist Party of China* (04), 99-102. doi:10.15875/j.cnki.zgzzswdxxb.2021.04.021.
- [16] Wang, Z. (2022). Dilemma and breakthrough path in cultivating college students' leadership. *Leadership Science* (09), 107-111. doi:10.19572/j.cnki.ldkx.2022.09.043.
- [17] Wang, Yan. xia. (2022). Research on the influence of club atmosphere on college students' leadership PhD (Dissertation, Xinjiang Normal University). PhD <https://link.cnki.net/doi/10.27432/d.cnki.gxsfu.2022.000010doi:10.27432/d.cnki.gxsfu.2022.000010>.
- [18] Vogel, B., Reichard, R. J., Batistič, S., & Černe, M. (2021). A bibliometric review of the leadership development field: How we got here, where we are, and where we are headed. *The Leadership Quarterly*, 32(5), 101381.
- [19] Mun, R. U., Ezzani, M. D., & Lee, L. E. (2020). Culturally relevant leadership in gifted education: A systematic literature review. *Journal for the Education of the Gifted*, 43(2), 108-142.
- [20] Huchting, K., & Bickett, J. (2023). The need for career-long professional learning for social justice leaders in affluent school contexts. In *Leading Socially Just Schools* (pp. 52-64). Routledge.
- [21] Day, D. V., Riggio, R. E., Tan, S. J., & Conger, J. A. (2021). Advancing the science of 21st-century leadership development: Theory, research, and practice. *The Leadership Quarterly*, 32(5), 101557.
- [22] Healy, M., Hammer, S., & McIlveen, P. (2022). Mapping graduate employability and career development in higher education research: A citation network analysis. *Studies in Higher Education*, 47(4), 799-811.
- [23] Kezar, A., Dizon, J. P. M., & Scott, D. (2020). Senior leadership teams in higher education: What we know and what we need to know. *Innovative Higher Education*, 45, 103-120.
- [24] Chao, Y. F., G, F. Y., Liu, H. Y., & He, N. (2024). Research on the development mechanism and improvement path of college students' self-leadership. *Journal of Jinzhou Medical University (Social Science Edition)* (04), 85-88. doi:10.13847/j.cnki.lnmu(sse).2024.04.020.
- [25] Liu, J., Li, J., Jia, C., Li, Y., & Wang, Q. (2024). Survey and Research on Enhancing the Employment Competitiveness of College Students. *Frontiers in Business, Economics and Management*.
- [26] Yan, L.L., (2020). Research on the construction of employment guidance management system for college students in Zhengzhou universities. *Journal of Jiamusi Vocational College* (01), 219-220.
- [27] Cheng, M., Adekola, O., Albia, J., & Cai, S. (2022). Employability in higher education: a review of key stakeholders' perspectives. *Higher Education Evaluation and Development*, 16(1), 16-31.
- [28] Dai, K., & Pham, T. (2024). Graduate employability and international education: an exploration of foreign students' experiences in China. *Higher Education Research & Development*, 1-16.
- [29] Song, X., & Xu, D. (2024). More Graduates, Fewer Skills? Vocational Education Expansion and Skilled Labour Shortages in China. *The China Quarterly*, 1-16.
- [30] Mtawa, N., Fongwa, S., & Wilson-Strydom, M. (2021). Enhancing graduate employability attributes and capabilities formation: a service-learning approach. *Teaching in Higher Education*, 26(5), 679-695.
- [31] Karimi, H., & Piña, A. (2021). Strategically Addressing the Soft Skills Gap Among STEM Undergraduates. *Journal of Research in STEM Education*.

- [32] Abdul Aziz, S.A., & Zainal Abiddin, N. (2022). Leadership Style and Entrepreneurial Leadership among University Students: A Literature Review. *International Journal of Learning and Development*.
- [33] Eimer, A., & Bohndick, C. (2021). How individual experiential backgrounds are related to the development of employability among university students. *Journal of Teaching and Learning for Graduate Employability*, 12(2), 114-130.
- [34] Steurer, M., van der Vaart, L., & Rothmann, S. (2022). Mapping managerial expectations of graduate employability attributes: A scoping review. *SA Journal of Industrial Psychology*, 48, 1990.
- [35] Bhusal, B.R. (2022). Perception of Graduating Students towards their Professional Settlement. *JMC Research Journal*.
- [36] Jiang, L., Chen, Z., & Lei, C. (2023). Current college graduates' employability factors based on university graduates in Shaanxi Province, China. *Frontiers in Psychology*, 13, 1042243.
- [37] Heimbach, C. R. (2024). A Study of the Employability of Graduates of the Bloomsburg University Zeigler College of Business.
- [38] Briones, G.F., Apat, E.J., Lorica, D.G., & Valenzuela, M.P. (2021). Employers' Preference on Employability Skills of Business Management and Accounting Graduates. *International Journal of Academe and Industry Research*.
- [39] Yue, X., Zou, L., Ye, Y., & Cai, T. (2024). The Impact of Undergraduates Servant Leadership on Their Employability. *SAGE Open*, 14(2), 21582440241260936.
- [40] Pan, H (2023). The impact of social practice participation on college students' leadership - the mediating role of self-efficacy and social value (Master's thesis, Nanning Normal University). Master's degree <https://link.cnki.net/doi/10.27037/d.cnki.ggxsc.2023.000819doi:10.27037/d.cnki.ggxsc.2023.000819>.
- [41] Zhang, Y. C., Zhang, Y., Xiong, X. L., Liu, J. B., & Zhai, R. B. (2022). An empirical study on the improvement of college students' employability based on university factors. *Frontiers in Psychology*, 13, 793492.
- [42] Gamage, K. A., Jeyachandran, K., Dehideniya, S. C., Lambert, C. G., & Rennie, A. E. (2023). Online and hybrid teaching effects on graduate attributes: opportunity or cause for concern?. *Education Sciences*, 13(2), 221.
- [43] Baird, A.M., & Parayitam, S. (2019). Employers' ratings of importance of skills and competencies college graduates need to get hired. *Education + Training*.
- [44] Pujol-Jover, M., Duque, L.C., & Riera-Prunera, M.C. (2022). The recruit requirements of recent graduates: approaching the existing mismatch. *Total Quality Management & Business Excellence*, 34, 57 - 70.
- [45] Chen, K., Tham, J., & Khatibi, A. (2024). Research on SVM Analysis Model of Influencing Factors of Employability of Graduates from Higher Vocational Colleges and Universities in Jiangxi Province. *Applied Mathematics and Nonlinear Sciences*, 9(1).
- [46] Abdullah, A.R., Muhammad, M.Z., & Md Nasir, N.A. (2021). The Role of Soft Skills on Business Graduates Employability. *Journal of Entrepreneurship and Business*.
- [47] Little, C.A., & Kearney, K.L. (2021). Leadership Development for High-Ability Secondary Students. *The Handbook of Secondary Gifted Education*.
- [48] Tang, B., Li, K.Q., & Huang, R.(2023). Research on the model and optimization path of college students' leadership education. *China Educational Technology Equipment* (14), 20-23.
- [49] Lubker, J.R., & Petrusa, E. (2022). Utilizing co-curricular learning tools to foster leadership development in graduate and professional schools: Examples and lessons learned. *New directions for student leadership*, 2022 176, 53-64.
- [50] Hasanah, E., Al Badar, M.I., Al Ghazy, M.I., & Fauzia, F. (2023). Enhancing Student Leadership Skills through Project-Based Learning in the Postgraduate Research Experience. *The Qualitative Report*.
- [51] Wang, Y.L., & O. Dapat, R. (2023). School Principals' Leadership Styles and Organizational Climate Toward Innovative Leadership Program. *Journal of Education and Educational Research*.
- [52] Odom, S.F., & Dunn, A.L. (2023). Leadership identity development in curricular settings. *New directions for student leadership*, 2023 178, 87-98.
- [53] Killion, A.K., Ostrow Michel, J., & Hawes, J.K. (2022). Toward Identifying Sustainability Leadership Competencies: Insights from Mapping a Graduate Sustainability Education Curriculum. *Sustainability*.
- [54] Okolie, U. C., Igwe, P. A., Nwosu, H. E., Eneje, B. C., & Mlanga, S. (2020). Enhancing graduate employability: Why do higher education institutions have problems with teaching generic skills?. *Policy Futures in Education*, 18(2), 294-313.
- [55] Perez-Encinas, A., & Berbegal-Mirabent, J. (2023). Who gets a job sooner? Results from a national survey of master's graduates. *Studies in Higher Education*, 48(1), 174-188.

Peng, Z., Khatibi, A., & Tham, J. (2025). *Journal of Theory and Practice in Education and Innovation*, 2(3), 22–32.

Disclaimer/Publisher’s Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of Woody International Publish Limited and/or the editor(s). Woody International Publish Limited and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.