

Designing and Validating the Model of Empowering Faculty Members to Encourage Students to Engage in Entrepreneurial Activities

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ABSTRACT

The present research adopts an exploratory and foundational approach to provide a conceptual framework for explaining the empowerment of faculty members in encouraging students' entrepreneurial activities. The statistical population of the qualitative and quantitative sections of the study consists of all faculty members of Farhangian University, totaling 820 individuals. The qualitative sample was selected using snowball and purposive sampling methods, consisting of 15 participants, while the quantitative sample was determined using the Morgan table and random sampling, totaling 265 participants. The data collection instruments for the qualitative section were semi-structured interviews, and for the quantitative section, a researcher-made questionnaire was used. The content validity of the interview questions and questionnaire was confirmed by 5 faculty members of Farhangian University. The reliability of the interview results was calculated and confirmed using the Holsti test with a coefficient of 0.81, and the questionnaire reliability was assessed and confirmed using Cronbach's alpha coefficient, which was equivalent to 0.837. The data analyzed using MAXQDA 20.4.2, IBM SPSS Statistics 26, and SmartPLS 3 software. The data analysis conducted using a data-driven theoretical framework, which included open, axial, and selective coding to achieve the extracted pattern from the research. The qualitative findings indicate that 6 dimensions, 14 factors, and 62 components of empowering faculty members are effective in encouraging students' entrepreneurial activities. The quantitative findings confirm the extracted pattern. Absolute and parsimonious fit indices support the desired fit of the empowerment model of faculty members in encouraging students' entrepreneurial activities.

Keywords: Faculty Members, Model, Empowerment, Entrepreneurship of Students.



Introduction

The empowerment of faculty members in universities is of great importance due to their significant role in the multidimensional development and progress of society. Faculty members, as one of the most important human capital assets of universities, play a noteworthy role in fostering entrepreneurship among students by possessing the necessary skills and competencies. Therefore, it is necessary for universities to identify and implement the dimensions and components of faculty empowerment in this field, taking into account their own conditions and requirements.

The study of previous research conducted to identify the main areas of activity of faculty members guides us to the realization that the quality of their activities is defined by their individual, professional, educational, and organizational development. The literature on this subject indicates that the focus of professional development activities for faculty members has predominantly revolved around teaching and research, while neglecting the development of other capacities such as decision-making, teamwork, and entrepreneurship. Despite the modern approach to entrepreneurship in universities, the findings of previous research demonstrate a lack of attention to empowering faculty members in fostering entrepreneurial motivation among students. Fostering entrepreneurial motivation among students is considered one of the fundamental needs of higher education institutions today. But, the lack of clarity regarding the necessary dimensions and components of faculty empowerment has resulted in many of them lacking the required capability to generate student interest in entrepreneurial activities. The reluctance of educated youth towards entrepreneurship and the minimal contribution of the entrepreneurial population to the overall workforce can be identified as the most significant issue in society's unemployment problem.

Considering the aforementioned challenges and the lack of a comprehensive model for empowering faculty members to encourage students in entrepreneurial activities, conducting this research appears essential. The purpose of this study is to obtain the perspectives of faculty members regarding entrepreneurship and to design and validate a model for the necessary dimensions and components of faculty empowerment to foster entrepreneurial activities among students.

Methodology

The present applied research is based on the interaction between theoretical studies and qualitative data analysis using grounded theory, followed by employing quantitative methods. The statistical population for both qualitative and quantitative stages consists of all 820 faculty members of Farhangian University, who were engaged in teaching during the academic year 2021-22.

The qualitative data collection tool for this research is a semi-structured interview conducted with knowledgeable and experienced professors in the field of entrepreneurship. The content validity of the interview questions was confirmed by six faculty members of Farhangian University who had entrepreneurial experience. The analysis of the interviews was conducted using MAXQDA 20.4.2 software, employing three stages of open, axial, and selective coding. To examine the reliability of the extracted results, inter-coder agreement was utilized, and the agreement coefficient was calculated using the Holsti test, resulting in an 81% agreement. The obtained reliability percentage, which is greater than 60, indicates acceptable reliability of the extracted evidence. The sampling method employed in the interviews was purposive and snowball sampling. In the purposive selection, attention was given to faculty members who had at least one experience, research, or study in the field of entrepreneurship. Since accessing all faculty members who had the desired characteristics posed a challenge, snowball sampling method was used. The sample size for the qualitative stage of the research was determined to be 15 individuals based on theoretical saturation and data repetition.

The quantitative data of the research were collected through a questionnaire. This questionnaire, aimed at evaluating the extracted conceptual model from the grounded theory, consisted of 62 questions with a five-point Likert scale ranging from strongly disagree (1 point) to strongly agree (5 points). Questions 1 to 23 addressed the causal conditions construct (including organizational factors, risk-taking, personality, and effective communication), questions 24 to 46 addressed the contextual conditions construct (including educational system, research system, and social system), questions 47 to 52 addressed the intervening conditions construct (including extra-organizational factors and environmental factors), questions 53 to 55 addressed the strategies construct (including reactivity and performance orientation), and questions 56 to 62 addressed the outcomes construct (including entrepreneurial motivation, organizational development, and social entrepreneurship). The

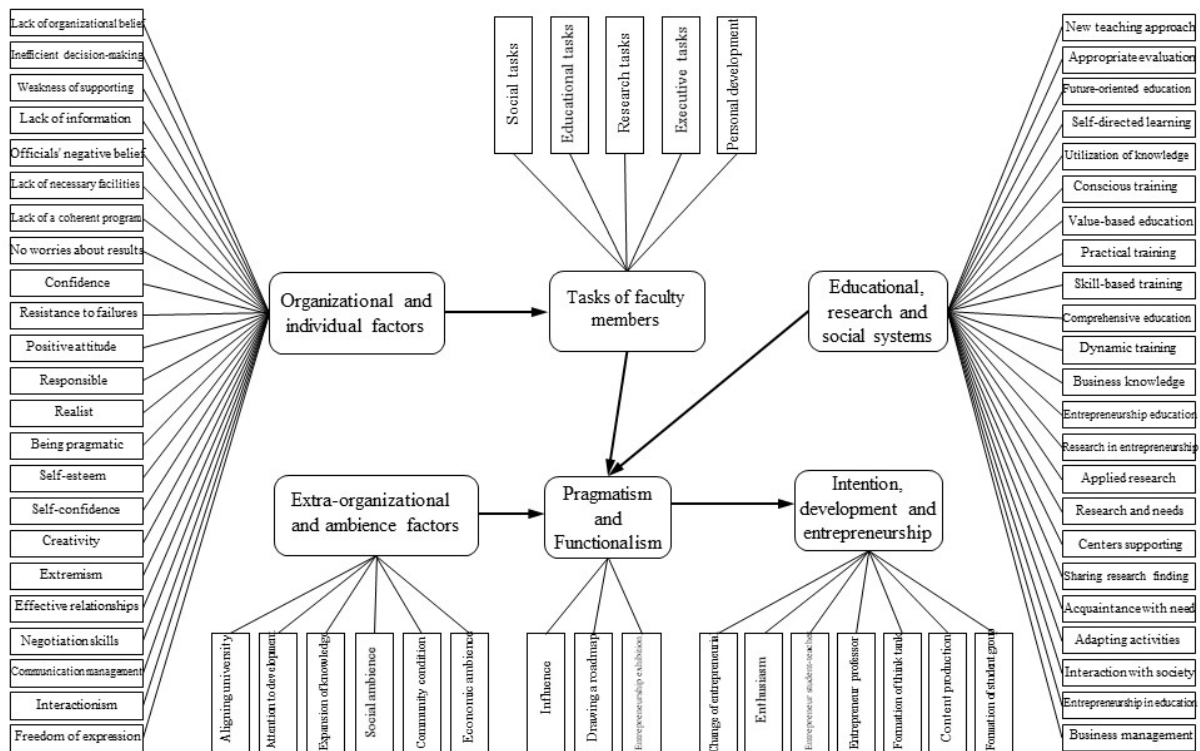
content and face validity of the questionnaire were examined and confirmed by the opinions of 6 university faculty members who had expertise in the field of entrepreneurship. The quantitative data were analyzed using IBM SPSS Statistics 26 and SmartPLS 3 software. The reliability of the researcher-developed questionnaire was calculated using Cronbach's alpha coefficient, which was found to be 0.837. The quantitative stage of the research employed a descriptive survey method, and the sampling strategy was random. The sample size for this stage was determined to be 265 based on the Krejcie and Morgan table.

Findings

After conducting the interviews and collecting data from the study sample, the complete content of each interview was transcribed, and then the analysis and interpretation of each word, phrase, sentence, and paragraph began. The initial examination of the conversations with 15 university faculty members resulted in the extraction of 103 conceptual statements. After repeated review of the conducted interviews, the concepts were coded in three successive stages. In the open coding stage, a total of 62 open codes were identified as the main concepts. In the axial coding stage, the concepts that emerged from the open coding stage were compared with each other, and those that shared common themes were grouped together. Through axial coding, 11 categories were identified, including organizational factors, risk-taking, personality, effective communication, educational system, research system, social system, extra-organizational factors, environmental factors, behavioral modeling, and entrepreneurship. In the selective coding stage, the findings from open and axial coding were given attention. Since the main topic of the research is to determine the model for empowering university faculty members to motivate students for entrepreneurial activities, "Empowering University Faculty Members to Encourage Entrepreneurial Activities among Students" was selected as the core code. The proposed model for empowering university faculty members to encourage entrepreneurial activities among students is presented in Figure 1.

Figure 1

Proposed model of empowering faculty members to encourage students to engage in entrepreneurial activities



To confirm and validate the model, confirmatory factor analysis was employed. Based on the data obtained from the questionnaire, the relationship between the components of empowering university faculty members and their constructs was



determined using factor loading and significant coefficients. Factor loading and T-statistics were used to examine the relationship between each component of empowering university faculty members (observed variable) and its constructs (latent variable). All path coefficients between the observed and latent variables were greater than zero, indicating that an increase in each construct leads to an increase in the components of empowering university faculty members. To assess the relationship between the components of empowering university faculty members to encourage entrepreneurial activities among students, absolute and parsimonious fit indices were utilized. The calculated values for each of the fit indices were compared to acceptable thresholds. This comparison confirms a 99% confidence level relationship between each of the components and constructs. The results obtained from the model validation demonstrate an acceptable relationship between the constructs and the main dimensions of the structural model, and the interplay between the components, as defined by the specified paths, is noteworthy. Furthermore, a strong relationship is observed between the components and all their respective constructs.

Conclusion

The qualitative findings indicate that 6 dimensions, 14 components, and 62 constructs of empowering university faculty members are effective in encouraging entrepreneurial activities among students. The first dimension addresses the central phenomenon of "empowering university faculty members." The second dimension focuses on contextual conditions, including organizational factors, risk-taking, personality, and effective communication. The third dimension encompasses the background conditions, which include educational, research, and social systems. The fourth dimension examines the intervening conditions, which involve extra-organizational and environmental factors. The fifth dimension pertains to strategies, with two identified components: action-oriented and performance-oriented. The sixth dimension, titled consequences, addresses the outcomes resulting from the empowerment of university faculty members. Three components, including entrepreneurial motivation, organizational development, and social entrepreneurship, have been identified as contributing to the outcomes of empowering university faculty members in encouraging entrepreneurial activities among students.

The quantitative findings confirm a 99% confidence level relationship between each of the components and constructs of empowering university faculty members in encouraging entrepreneurial activities among students. The absolute and parsimonious fit indices of the questionnaire support a desirable fit to the extracted model from the research.

In general, based on the findings of this study, students require certain incentives to engage in entrepreneurial programs. These incentives vary greatly due to the ever-changing developments in society and the fluctuating economic, social, and cultural conditions of the country. The identification of components of empowering university faculty members is highly beneficial for effective and fruitful planning to create or enhance entrepreneurial motivation among students. If students feel that their professors have a genuine interest, sufficient knowledge, and experience in entrepreneurship, and their responsibilities are aligned with the entrepreneurial needs of the students, they demonstrate a greater inclination and willingness towards entrepreneurship.

Based on the findings of the present study, the following practical recommendations are provided:

- University leaders and higher education institutions should plan and develop entrepreneurship promotion programs for faculty members.
- Conduct entrepreneurship training courses and workshops tailored to the academic disciplines of faculty members and students.

Establish entrepreneurship development offices and centers within universities to support the empowerment programs of faculty members in entrepreneurial activities.

References

- Adeel, S., Daniel, A. D., & Botelho, A. (2023). The effect of entrepreneurship education on the determinants of entrepreneurial behaviour among higher education students: A multi-group analysis. *Journal of Innovation & Knowledge*, 8(1), 100324. <https://doi.org/10.1016/j.jik.2023.100324>
- Akrami, Z. (2022). The effectiveness of education with the STEM approach in the development of entrepreneurial thinking in chemistry students. *Chemistry Education Research and Practice*, 23(2), 475-485. <https://doi.org/10.1039/D2RP00011C>

- Alipoor, F., Romiani, Y., & yarahmadi, M. (2023). Developing and validation of recruitment model of faculty members in University of Farhangian with emphasis on upstream documents: A mixed study. *Quarterly Journal of Research and Planning in Higher Education*, 29(4), 123-139. <https://doi.org/10.61838/kman.irphe.29.4.7>
- Alkhalaf, T., Durrak, O., Almohammad, D., & Ahmed, F. (2022). Can entrepreneurial knowledge boost the entrepreneurial intent of French students? The mediation role of behavioral antecedents. *Management Research Review*, 45(12), 1545-1571. <https://doi.org/10.1108/MRR-06-2021-0432>
- Asadi, A., Taheri, M., & Salari, A. (2016). The survey of educational needs to empower faculties in GUMS. <https://doi.org/10.18869/acadpub.rme.8.2.37>
- Aytekin, A., Ecer, F., Korucuk, S., & Karamaşa, Ç. (2022). Global innovation efficiency assessment of EU member and candidate countries via DEA-EATWIOS multi-criteria methodology. *Technology in Society*, 68, 101896. <https://doi.org/10.1016/j.techsoc.2022.101896>
- Babchuk, W. A., & Boswell, E. (2023). Grounded theory. In R. J. Tierney, F. Rizvi, & K. Ercikan (Eds.), *International Encyclopedia of Education (Fourth Edition)* (pp. 107-122). Elsevier. <https://doi.org/10.1016/B978-0-12-818630-5.11013-9>
- Barari Paein Lemoki, S., Tabari, M., & Matani, M. (2023). Explain the role of university green entrepreneurial orientation in shaping the green creativity of entrepreneurial students. *Journal of Entrepreneurship Development*, 16(1), 47-59. <https://doi.org/10.22059/jed.2022.335889.653878>
- Bilal, Guraya, S. Y., & Chen, S. (2019). The impact and effectiveness of faculty development program in fostering the faculty's knowledge, skills, and professional competence: A systematic review and meta-analysis. *Saudi Journal of Biological Sciences*, 26(4), 688-697. <https://doi.org/10.1016/j.sjbs.2017.10.024>
- Cronbach, L. J., & Shavelson, R. J. (2004). My Current Thoughts on Coefficient Alpha and Successor Procedures. *Educational and psychological measurement*, 64(3), 391-418. <https://doi.org/10.1177/0013164404266386>
- Darabi, M. (2022). Designing and validating the quality management model of teaching activities for university faculty members. *Quarterly Journal of Research and Planning in Higher Education*, 28(3), 55-83. <https://doi.org/10.52547/irphe.28.3.55>
- Dolczewski, M. (2022). Semi-structured interview for self-esteem regulation research. *Acta Psychologica*, 228, 103642. <https://doi.org/10.1016/j.actpsy.2022.103642>
- Edjtehadi, M., Ghorchian, N., Jaafari, P., & Shafizadeh, H. (2023). Identifying Dimensions and Components of Faculty Members Developments in Order to Present of A Conceptual Model. *Quarterly Journal of Research and Planning in Higher Education*, 17(4), 21-26. https://journal.irphe.ac.ir/article_702767_ff56e7156b52ea5061ca216608bb327b.pdf
- Fayyaz, R., Shah Talebi, B., & Ebrahimzadeh, R. (2020). Developing a model for empowerment of faculty members in Islamic Azad University: a qualitative study. *Strides in Development of Medical Education*, 17(1), 1-8. https://sdme.kmu.ac.ir/article_91549_2c63b83f610929f234054c5e0754c193.pdf
- Fazel, A., Kamalian, A., & Rowshan, A. (2017). Identification of Effective Dimensions and Components on Academic Human Resources Empowerment, Emphasizing the Third and Fourth Generation of Universities With Fuzzy Delphi Approach: Presenting a Conceptual Model [Original Research]. *Bimonthly of Education Strategies in Medical Sciences*, 10(6), 455-468. <http://edcbmj.ir/article-1-1199-en.html>
- Fotuhi, M., Akbari, A., Cherabin, M., & Maghool, A. (2020). Presentation of Faculty Member's Empowerment Model of Farhangian University. *Educational Development of Judishapur*, 11(2), 219-232. <https://doi.org/10.22118/edc.2019.206487.1177>
- Ghorooneh, D., Mirkamali, S. M., Bazargan, A., & Kharazi, S. K. (2023). A model for faculty development at the University of Tehran. *Quarterly Journal of Research and Planning in Higher Education*, 22(3), 1-17. https://journal.irphe.ac.ir/article_702901_7b7e6e12ca095c68930880329d46757e.pdf
- Gouvea, R., Lehneman, L., & Terra, B. (2022). Tribal economic development & entrepreneurship: A latin american perspective. *World Development Perspectives*, 26, 100403. <https://doi.org/10.1016/j.wdp.2022.100403>
- Gullatt, D. E., & Weaver, S. W. (1997). Use of Faculty Development Activities To Improve the Effectiveness of US Institutions of Higher Education. <https://eric.ed.gov/?id=ED414796>
- Hajimiri, K., Moradi, M., Hosseini, E., Jafari, M., & Nasehi, L. (2023). A conceptual model for empowering faculty members of third-generation universities of medical sciences. *Journal of Taibah University Medical Sciences*, 18(2), 371-382. <https://doi.org/10.1016/j.jtumed.2022.10.002>
- Hejazi, A. (2020). Determining the components of professional development of faculty members of Farhangian University. *Research in Teacher Education (RTE)*, 3(1), 41-61. https://te-research.cfu.ac.ir/article_1187_1b7ced0735e01c384c704ffcebb9616d.pdf
- Hennessy, S., D'Angelo, S., McIntyre, N., Koomar, S., Kreimeia, A., Cao, L., Brughna, M., & Zubairi, A. (2022). Technology Use for Teacher Professional Development in Low- and Middle-Income Countries: A systematic review. *Computers and Education Open*, 3, 100080. <https://doi.org/10.1016/j.caeo.2022.100080>
- Homayeni Damirchi, A., Mahjob Eshratbadi, H., Mehri, D., & Vosoghi-Niri, A. (2016). The Evaluation of the Academic Development of Faculty Members of University and Proposing Suitable Strategies for Its Enhancement (Case Study; A Military University). *MILITARY MANAGEMENT QUARTERLY*, 16(61), 29-59. https://jmm.iranjournals.ir/article_22373_7c322de4c89cb38c5039a868ca59e34d.pdf
- Khajehpour, N., Baharlou, M., Beshlideh, K., & Yeganeh, M. M. (2016). The effect of servant leadership on organizational commitment: The mediating role of psychological empowerment and organizational justice. *International journal of psychology*, 10(2), 55-81. <https://www.sid.ir/FileServer/JE/5062520160204.pdf>
- Kimmit, J., Muñoz, P., & Newbery, R. (2020). Poverty and the varieties of entrepreneurship in the pursuit of prosperity. *Journal of Business Venturing*, 35(4), 105939. <https://doi.org/10.1016/j.jbusvent.2019.05.003>
- Krejcie, R. V., & Morgan, D. W. (1970). Determining Sample Size for Research Activities. *Educational and psychological measurement*, 30(3), 607-610. <https://doi.org/10.1177/001316447003000308>
- Lai, Y., Lischka, A. E., Strayer, J. F., & Adamoah, K. (2023). Characterizing prospective secondary teachers' foundation and contingency knowledge for definitions of transformations. *The Journal of Mathematical Behavior*, 70, 101030. <https://doi.org/10.1016/j.jmathb.2022.101030>
- Maden-Eyiusta, C., & Alten, O. (2023). Expansion-oriented job crafting and employee performance: A self-empowerment perspective. *European Management Journal*, 41(1), 79-89. <https://doi.org/10.1016/j.emj.2021.10.012>



- Mahmoudzadeh, S. M. (2016). *Human resources empowerment model of najah human resources (Commanders and Managers)* Allameh Tabataba'i University School of Management and Accounting
- Martínez-Gregorio, S., Badenes-Ribera, L., & Oliver, A. (2021). Effect of entrepreneurship education on entrepreneurship intention and related outcomes in educational contexts: a meta-analysis. *The International Journal of Management Education*, 19(3), 100545. <https://doi.org/10.1016/j.ijme.2021.100545>
- Mohebzadegan, Y., Pardakhtchi, M. H., Ghahramani, M., & Farasatkah, M. (2023). Developing a Model for Faculty Development Approach based on Grounded Theory. *Quarterly Journal of Research and Planning in Higher Education*, 19(4), 1-25. https://journal.irphe.ac.ir/article_702824_2a0f223223b542a0bd996f6d9b0362af.pdf
- Moradi, E., & Didehban, H. (2017). FACULTY MEMBERS DEVELOPMENT IN MEDICAL EDUCATION: PROGRAMS, INTERVENTIONS AND OUTCOMES [Review article]. *Nursing and Midwifery Journal*, 15(1), 10-18. <http://unmf.umsu.ac.ir/article-1-3068-en.html>
- Rezaeian, A., Khandan, A. A., Ganj Ali, A., & Moridian, H. (2015). The progress of scientific members at universities (Case study: Scientific members of Imam Sadegh University). https://irisweb.ir/rdsm_jarticle_list.php?slc_lang=fa&sid=1&mod=jarticle_profile&jart_id=202728&rds_id=
- Rezaie, R., Karimi, A., Mirikaram, F., & Safa, L. (2012). Examining the educational needs of master's degree students in agriculture in the field of entrepreneurship (Case Study: Zanjan University). *Journal of Entrepreneurship Development*, 5(3), 65-84. <https://doi.org/10.22059/jed.2012.29471>
- Seyyed Hatami, S. S., Namvar, Y., Soleimani, T., & Zahed Babolan, A. (2023). A meta-analysis of factors influencing the development of university faculty members. *Quarterly Journal of Research and Planning in Higher Education*, 24(4), 99-121. https://journal.irphe.ac.ir/article_702965_92b2138e24b9f689ca9dc8dfd0c086ef.pdf
- Shabani Bahar, G. R., Ghareh, M. A., & Siavashi, M. (2020). "Designing Structural Model of Development Professional, Organizational and Persona Faculty members of Physical Education and Sports Science". *Applied Research in Sport Management*, 8(4), 99-112. <https://doi.org/10.30473/arsm.2020.6811>
- Sharma, G. D., Kraus, S., Liguori, E., Bamel, U. K., & Chopra, R. (2024). Entrepreneurial challenges of COVID-19: Re-thinking entrepreneurship after the crisis. *Journal of Small Business Management*, 62(2), 824-846. <https://doi.org/10.1080/00472778.2022.2089676>
- Silva, I. M. d., Nogueira, T. Q. d. S., Couto, D. N., Lima, P. C. T. M., Bonfim, N. S. C., Sousa, I. G. V. d., Telles, A. C. T., Hecht, F., Alkmim, N. R., Penna, G. C. e., Ferraz, C., Tomimori, E., & Ramos, H. E. (2022). Feasibility of a snowball sampling survey to study active surveillance for thyroid microcarcinoma treatment among endocrinologists and surgeons of Brazil. *Brazilian Journal of Otorhinolaryngology*, 88, S163-S169. <https://doi.org/10.1016/j.bjorl.2022.01.005>
- Soares, G. G., Lélío da Silva Braga, V., Susana da Encarnação Marques, C., & Ratten, V. (2021). Corporate entrepreneurship education's impact on family business sustainability: A case study in Brazil. *The International Journal of Management Education*, 19(1), 100424. <https://doi.org/10.1016/j.ijme.2020.100424>
- Soltani, A., Boostani, D., & Golestani, S. (2020). Exploring the strategies of faculty-student interactions: A grounded theory study in Iranian academic context. *Learning, Culture and Social Interaction*, 26, 100408. <https://doi.org/10.1016/j.lcsi.2020.100408>
- WEBB, J. W. (2021). A SYSTEM-LEVEL VIEW OF INSTITUTIONS: CONSIDERATIONS FOR ENTREPRENEURSHIP AND POVERTY. *Journal of Developmental Entrepreneurship*, 26(02), 2150010. <https://doi.org/10.1142/s1084946721500102>
- Wibowo, A., & Saptono, A. (2018). Does TEACHERS' CREATIVITY impact on vocational STUDENTS' ENTREPRENEURIAL intention? *Journal of Entrepreneurship Education*, 21(3), 1-12. <https://search.proquest.com/openview/5cebd574cc0ba5250075107b9d820789/1?pq-origsite=gscholar&cbl=28224>
- Zahedi, M. R., & Javadi Kamni, S. (2018). Knowledge flow approach and its role in enterprise entrepreneurship. *Science and Technology Policy Letters*, 08(3), 63-75. https://stpl.ristip.sharif.ir/article_21361_0fe8a9c5c5a840cf5d9bf4b73d8b9e21.pdf
- Zhou, Y., & Zhou, H. (2022). Research on the Quality Evaluation of Innovation and Entrepreneurship Education of College Students Based on Extenics. *Procedia Computer Science*, 199, 605-612. <https://doi.org/10.1016/j.procs.2022.01.074>
- Zhu, R., Liu, Z., Zhao, G., Huang, Z., & Yu, Q. (2023). The impact of institutional management on teacher entrepreneurship competency: The mediating role of entrepreneurial behaviour. *The International Journal of Management Education*, 21(2), 100794. <https://doi.org/10.1016/j.ijme.2023.100794>