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Enhancing Entrepreneurial Performance Through Knowledge Management: Perspective in Education Sector in Indonesian

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Abstract

Entrepreneurship development is known to play a critical role in advancing and fostering progress within schools. Therefore, this paper aims to examine the direct effect of knowledge management on entrepreneurial performance as well as measure the mediating role of value co-creation in this relationship. For these purposes, an empirical survey was conducted with the active participation of 380 respondents, comprising of school principals, teachers, and school council members. The quantitative data sources were principals, teacher representatives, and committees. The results showed that knowledge management could improve entrepreneurial performance and value co-creation. In addition, value co-creation had no direct effect on entrepreneurial performance and did not mediate the influence of knowledge management on entrepreneurial performance.

Keywords: Education, Entrepreneurial Performance, Knowledge Management, Schools, Value Co-Creation.

Introduction

To cultivate high-quality human resources through education, schools must become institutions that adapt and advance in line with the needs and demands of society. Schools must be regarded as public service institutions, with schools adopting an entrepreneurial mindset to foster innovation and creativity in management practices (Drucker, 1985). Further studies on the influential factors to enhance entrepreneurial performance is important, as schools prepare human resources who can develop economic growth. This is in accordance with the results of a study of 27 European Union countries for 12 years, proving that entrepreneurship has a significant role in increasing the economic development of European Union countries and various countries in the world (Rusu et al., 2022); (J.Acs, Zoltan; Audretsh, 2011).

However, the 2015 survey by the Ministry of Education and Culture indicates that entrepreneurial management in Indonesian schools remains underdeveloped (Kemendikbud, 2015). According to the Global Entrepreneurial Monitor (GEM) 2022/2023 report on the entrepreneurial framework conditions in Indonesia, there was a significant decline in entrepreneurship education. The score dropped from 6.6 in 2021/2022 to 4.7 in 2022/2023.

To identify ways to enhance entrepreneurial performance in schools, further studies on the

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influential factors is essential. Knowledge management has been identified as a key factor for improvement. Despite the potential, most studies focused on the business sector, with only a few exploring education. Therefore, the current study fills that gap by examining the effect of knowledge management on entrepreneurial performance within the education sector, offering a novel contribution to literature.

The following are several previous studies conducted in the business sector which state that knowledge management has been proven to be able to improve performance. Li (2020) found that knowledge management practices had a positive and significant impact on entrepreneurial performance among entrepreneurs in Pakistan (Li et al., 2020). Knowledge management in knowledge sharing as a key indicator has been shown to enhance company performance (Li et al., 2020; Qader (2022) also discovered that among textile SME entrepreneurs in China, these practices positively influenced the sustainability of entrepreneurship and organizational performance through knowledge sharing, information exchange, and the dissemination of organizational knowledge (Qader et al., 2022).

The current study addresses the relationship between knowledge management and entrepreneurial performance by examining these effects within the education sector. Replicating results from the business industry in this context adds novelty to the study. In a competitive environment, knowledge management is a critical organizational asset, helping organizations acquire valuable information and implement innovative methods for managing knowledge (Masadeh et al., 2019).

Another factor that has the potential to increase entrepreneurial performance is value co-creation, which is the process of creating shared value between service recipients and providers through collaboration in various stages (X. Wang et al., 2022). Studies related to value co-creation are widely conducted in the business industry. The study planned to be conducted in the education industry will be a novelty because it is expected to fill the gap in the limitations of previous studies by replicating results. Value co-creation in the education industry is an important part (Benevene et al., 2018). In line with this, the education industry is part of the service sector (Maria, et al., 2015).

Based on these findings, it is interesting to conduct a study on whether knowledge management can affect entrepreneurial performance and value co-creation in schools; whether value co-creation can affect entrepreneurial performance; and whether value co-creation can mediate knowledge management in improving entrepreneurial performance in schools. This study will test previous results due to their limitations by replicating results in the business industry to be applied in the education industry as well as fill gaps due to differences in samples. The results are expected to expand the development of science in the fields of knowledge management, value co-creation, and entrepreneurial performance in the education industry in Indonesia.

Literature Review

This study aimed to test the effect of knowledge management on entrepreneurial performance and value co-creation as well as the role of value co-creation in mediating the effect of knowledge management on entrepreneurial performance. The results were expected to contribute to expanding the development of science related to the effect of knowledge management on value co-creation and entrepreneurial performance. In addition to these, the results facilitated the effect of value co-creation in mediating knowledge management on entrepreneurial performance, as well as providing practical references for educational

institutions as a solution to enhance entrepreneurial performance.

Knowledge Management

Knowledge management was a method that used knowledge and expertise to create and provide added value to improve organizational efficiency through the process of collecting, organizing, and transforming knowledge for implementation (Li et al., 2020). It facilitated innovative practices in organizations through the process of transforming knowledge assets into new products and services as well as encouraging the exchange of knowledge, therefore innovation occurred and new ideas emerged (Feng et al., 2022). In addition, knowledge management was defined as the process of integrating information, including storing and applying knowledge to obtain, store, and apply relevant information in the organization (Zhou et al., 2020). Consequently, it could be concluded that knowledge management in this study was defined as the ability of schools to use knowledge and expertise to create and provide added value via the process of collecting, organizing, and transforming knowledge for implementation, therefore improving organizational performance.

This study could replicate the knowledge management indicators proposed by Li (2020). Knowledge management was characterized by first, schools that actively shared with educators. Second, schools that actively share with education personnel, third, those who provide time to share knowledge. Fourth, schools conducting the innovation process, fifth, those that actively seek innovative ideas, sixth, those meeting with partners, seventh, schools meeting with professionals. Eighth, schools that were aware of the demands of environmental change, ninth, schools storing knowledge with technology, tenth, those using various knowledge in technology platforms, and eleventh, those who were aware of the benefits of knowledge (Li et al., 2020). The ability of schools to conduct knowledge management practices could improve entrepreneurial performance in developing various entrepreneurship development programs in schools, supporting the achievement of performance.

Entrepreneurial Performance

Entrepreneurial performance was the achievement of several activities to support the achievement of organizational performance (Pu et al., 2022; Chandler & Hanks, 1993). Furthermore, it was the achievement of various entrepreneurial activities that allowed achieving organizational goals (Baron, 2004). Entrepreneurial performance could be interpreted as the creation of various new activities in the organization that support the achievement of goals (Kantur, 2016; Li et al., 2020). In addition, it was also interpreted as the creation of new values, creativity, and other things performed to achieve organizational performance (Li et al., 2020; Miao et al., 2017). Based on that, in this study, entrepreneurial performance was defined as the achievement of the schools in implementing several entrepreneurial development programs therefore supporting the achievement of performance.

According to previous studies, entrepreneurial performance could be measured by the growth of entrepreneurial development programs for students, the growth of school canteen programs the growth of school cooperative programs, the growth of other production unit programs, and satisfaction with various entrepreneurial development programs for students. Others included satisfaction with the growth of several production unit programs, satisfaction with the profits obtained by schools, comparison of entrepreneurial development programs in schools with other schools, comparison of production unit programs in schools with other schools, and comparison of profits obtained by schools with other schools (Pu et al., 2022; Chandler & Hanks, 1993).

Value co-creation was the core of the solution in providing services. Value could be formed based on the relationship between service providers and recipients (Rönnerberg Sjödin et al., 2016). In the value co-creation process, stakeholders played an active role in creating shared value with the organization (Kohler et al., 2011; Prahalad & Ramaswamy, 2004; Ranjan & Read, 2014). Another opinion stated that value co-creation was a collaborative process of creating value between service providers and recipients, therefore partnerships could be established. In this process, the value created was in the service system, formed from the process of knowledge exchange (Sun et al., 2022; Wiścicka-Fernando et al., 2019). Value co-creation in the context of this study was the ability of schools to actively empower stakeholders (committees, parents, regency/education offices, partners, and communities) to be involved in various activities to ensure the creation of shared value to improve education services.

The value co-creation indicator was adopted by X. (X. Wang et al., 2022) and (Ranjan & Read, 2014). The value co-creation indicator in schools could be seen through several processes, such as being open to ideas and suggestions from stakeholders, sharing information about school services, providing access to stakeholders to contribute to schools, realizing the importance of stakeholders in the school service process, providing services in line with stakeholder expectations, listening to stakeholders convey the services expected of the schools, making dialogue with stakeholders for the development of school services, and providing opportunities for stakeholders to be involved in developing school services (X. Wang et al., 2022; Ranjan & Read, 2014). These activities could create new value for schools and stakeholders in realizing the expected educational services.

Knowledge Management and Entrepreneurial Performance

Some references revealed that knowledge management had a positive and significant effect on entrepreneurial performance (Li et al., 2020; Feng et al., 2022; Qader et al., 2022; Tshiaba et al., 2021; Epezagne Assamala et al., 2022). However, some references also showed that knowledge management had no direct effect on entrepreneurial performance, therefore other factors were needed to act as mediators (Li et al., 2020; Qader et al., 2022; Hussain & Li, 2022). This study could fill the gap in the inconsistency of the results regarding the effect of knowledge management on entrepreneurial performance. The practice of knowledge management through knowledge sharing, innovation capacity, and knowledge absorption in schools encouraged efforts to grow various entrepreneurial activities conducted by schools to promote the achievement of goals, create satisfaction with the performance produced, and enhance the performance of principals compared to the performance of principals from other schools (Pu et al., 2022; Siregar et al., 2020). According to several studies, the hypothesis could be formulated as follows: Hypothesis 1 (H1) Knowledge management had a positive and significant effect on entrepreneurial performance.

Knowledge Management and Value Co-Creation

Value co-creation was a solution to create innovation in providing public services, by involving service users in the provision of public services, potentially enhancing performance (Alves, 2013; Rönnerberg Sjödin et al., 2016). In conducting this process, management of various knowledge, information, ideas, suggestions, and involvement from service users was needed, therefore it could be used as a reference in aligning the services provided and the needs of users. This opinion was supported by other studies that there was an effective relationship between

knowledge management practices through knowledge transfer and absorption capacity with value co-creation work results (Z. Wang et al., 2019; H. Zhang et al., 2019). Another finding by Zhang (2019), further strengthened this relationship that social interaction had a positive effect on knowledge-sharing and integration behavior, therefore creating co-creation through knowledge (Y. Zhang et al., 2019).

Based on these analyses, knowledge management had a relationship with value co-creation. Schools that could share knowledge and information with stakeholders, and accept various ideas, suggestions, and input from stakeholders, could align services according to expected needs (Li et al., 2020; Ranjbarfard & Heidari Sureshjani, 2018). References related to the effect of knowledge management on value co-creation were the basis for formulating the following hypothesis: Hypothesis 2 (H2) Knowledge management has a positive and significant effect on value co-creation.

Value Co-Creation and Entrepreneurial Performance

Some references depicted that value co-creation played a major role in improving performance (S. Trang et al., 2022; Chao et al., 2019; Otchere, Samuel; Addy, Winfred; Hongyun, 2019). In the value co-creation process, stakeholders played an active role in creating shared value with the organization, through cooperation in the stages of the service process and usage (Payne et al., 2008; Hoyer et al., 2010; Ranjan & Read, 2014). Furthermore, it usually existed in the business sector, then it was interesting when this study was conducted in the education services industry. Based on several references, the hypothesis could be formulated as follows: Hypothesis 3 (H3) Value co-creation has a positive and significant effect on entrepreneurial performance.

Knowledge Management, Value Co-Creation, and Entrepreneurial Performance

Some references indicated that knowledge management had a direct and indirect effect on entrepreneurial performance (Li et al., 2020; Qader et al., 2022; Hussain & Li, 2022). The ability of schools to interact, and share ideas, and creativity with stakeholders mediated the effect of knowledge management on entrepreneurial performance (X. Wang et al., 2022; Pu et al., 2022). According to these references, the hypothesis could be formulated as follows: Hypothesis 4 (H4) Value co-creation has a positive and significant effect in mediating the effect of knowledge management on entrepreneurial performance.

Methodology

Research Design

This study used quantitative methods to test objective theories by examining the influence between variables. Theories were built deductively to be tested empirically to produce a concept that eliminated bias, provided alternative explanations, and generalized or replicated findings (Creswell, 2014). In quantitative methods, a survey design was used to collect information from or about people in describing, comparing, or explaining their knowledge, attitudes, and behaviors (Sekaran, 2016). The survey could provide a quantitative description regarding the trend of attitudes or opinions of the population by studying a sample. A structured questionnaire was used for data collection to generalize from the sample to the population (Bandur, 2020).

Participants

This study was conducted in educational institutions at a junior high school level because it allowed this study to be conducted. The data sources are principals, teachers, and committees.

The assessment from various sources provided objective standards for evaluating entrepreneurial performance in schools (Kandpal et al., 2018).

Data Collection

The population in this study was educational institutions in the form of junior high schools in Indonesia, both state and private, totaling 42,260. The number of samples in this study was determined using the Krejcie and Morgan Table (1970) with a confidence level of 95% and a margin of error of 5% or 0.05 (Krejcie et al., 1970; Sekaran, 2016). Based on the population in this study, the number of samples needed was 380.

The sampling technique used was multistage cluster sampling. Multistage sampling was a random sampling technique in several stages based on the natural cluster hierarchy structure in the population (Sedgwick, 2015; Bandur, 2021). The selection of this technique was considered the most appropriate due to the large population size, which required several stages in determining the sample. At each stage, a simple random technique could be used. In the first stage, the territory of Indonesia was divided into 3, namely western, central, and eastern regions. Furthermore, provinces were randomly selected in each region by considering the comparison of the number of provinces in each region.

Data Analysis

This study used a quantitative analysis design with a multivariate analysis method because the multivariate analysis method could explain more than 1 variable. This study used the independent variable of knowledge management, the mediating variable of value co-creation, and the dependent variable of entrepreneurial performance. The multivariate analysis design used Structural Equation Modeling (SEM). SEM consisted of 2 sub-models, namely a measurement model through factor analysis and a structural model through path analysis. Factor analysis was conducted to assess how well the indicators represented the latent variables observed in this study. Meanwhile, the structural model allowed for estimating the strength of the reciprocal relationship between latent variables or unobservable constructs (Gallagher et al., 2008). Through these 2 models, analysis could be carried out, allowing the construction, testing, and confirmation of complex relationship models.

The first stage in SEM processing was to analyze the measurement model through Confirmatory Factor Analysis (CFA). Measurement model analysis aimed to determine whether the observed variables or indicators determined theoretically represented the related variables in the model through a validity test (Hair et al., 2014). Hair (2010) stated that it was said to be valid when the standardized loading factor (SLF) value was ≥ 0.5 and the average variance extracted (AVE) value was ≥ 0.5 . A reliability test was carried out to determine the internal consistency level of indicators in measuring certain latent variables. In the reliability test, the Construct Reliability (CR) value was used where the indicator was said to be reliable when the CR value was ≥ 0.7 (Hair et al., 2014). The validity and reliability measurement evaluation results in this study were shown in Table 1.

According to the CFA measurement results, all indicators had a valid category because the SLF value standard ≥ 0.5 was fulfilled. This suggested that all indicators were valid in measuring their constructs. In addition, all variables had an AVE value ≥ 0.5 , meaning that the construct validity had been fulfilled. It could be concluded that all variables were categorized as reliable because the standard CR value ≥ 0.7 was fulfilled. The analysis could be performed in the next stage, namely the model goodness of fit test.

In SEM analysis, a model goodness of fit test analysis was carried out. Evaluation of the goodness of fit criteria was useful for testing the suitability of the model. According to the study by Hair, et al. (2010) in Latan (2012: 49), the suitability of data with a good overall model could be indicated by the fulfillment of at least 4 to 5 goodness of fit (Haryono, 2013). Based on the test of goodness of fit, this model was fit or said to be feasible. This was because of at least 4 goodness of fit indices criterion. A fit model suggested that it had fulfilled theoretical frequency expectations and could proceed to the next stage, namely structural model analysis (hypothesis test).

After the model measurement analysis stated that the construct was valid and reliable as well as the model was fit, the next stage was the structural model analysis.

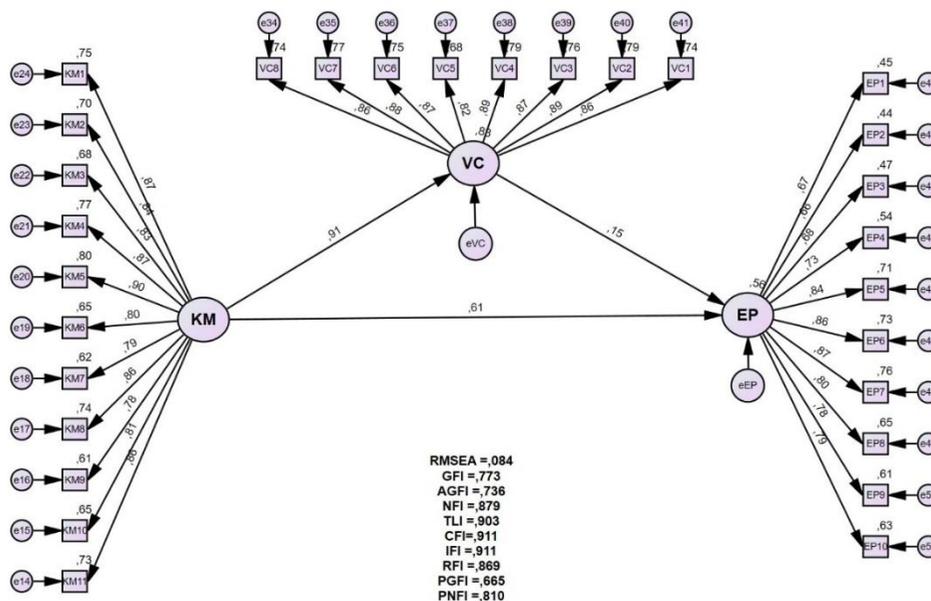


Figure 1. Path Diagram of the Study Model

Source: AMOS Version 24 Results, Processed by the Study team (2024)

The description of Figure 1 was as follows: KM= Knowledge Management; VCC= Value Co-Creation; and EP= Entrepreneurial Performance.

Structural model analysis was carried out to analyze and determine the relationship between the latent variables being tested. Structural model analysis in this study was used to answer the proposed hypotheses. The significance level used was 5% with the one-tailed method. The one-tailed significance value of 5% is 1.645 (absolute) where the significance value of t (C.R.) was less than -1.645 and greater than 1.645. Therefore, when the path coefficient (estimate) was positive and the t-statistic value was > 1.645 or the resulting significance value (p-value) was < 0.05, it indicated a positive and significant effect on a relationship between variables (Hair et al, 2015). The following were the hypothesis test results of this study.

	Path	Estimate	e	C.R.	P	Description
H1	Knowledge Management (KM) --> Entrepreneurial Performance (EP)	0.574	0.102	5.610	0.000	Positive and significant
H2	Knowledge Management (KM) --> Value Co-Creation (VC)	0.973	0.051	19.054	0.000	Positive and significant
H3	Value Co-Creation (VC)--> Entrepreneurial Performance (EP)	0.111	0.090	1.237	0.216	Positive and insignificant

Table 1. Hypothesis Test Results for Direct Effect

Source: AMOS Version 24 Results, Processed by the Study team (2024)

Based on the relationship between the relationship between knowledge management and entrepreneurial performance had a path coefficient (estimate) of 0.574, a t-value (C.R.) of 5.610 (>1.645), and a p-value (P) of 0.000 (<0.05). Based on these results, it could be concluded that knowledge management had a positive and statistically significant relationship to entrepreneurial performance. Therefore, the first hypothesis (H1) in this study was accepted or the data supported the hypothesis.

Knowledge management and value co-creation had a path coefficient (estimate) of 0.973, a t-value (C.R.) of 19.054 (> 1.645), and a p-value (P) of 0.000 (<0.05). Based on these results, it could be concluded that knowledge management had a positive and statistically significant relationship with entrepreneurial performance. Therefore, the second hypothesis (H2) in this study was accepted or the data supported the hypothesis.

The relationship between value co-creation and entrepreneurial performance had a path coefficient (estimate) of 0.111, a t-value (C.R.) of 1.237 (≤ 1.645), and a p-value (P) of 0.216 (≥ 0.05). Based on these results, it could be concluded that knowledge management had a positive but not statistically significant relationship to entrepreneurial performance. Therefore, the third hypothesis (H3) in this study was rejected or the data did not support the hypothesis.

The next structural model analysis, namely the mediation hypothesis test, was carried out to test the strength of the indirect effect of exogenous variables on endogenous variables through mediating variables. When the p-value was ≤ 0.05 with a confidence level of 95%, then the hypothesis was accepted or mediated positively and significantly. The mediation relationship test results were shown in Table 2 as follows:

	Path	Standardized Estimate	P	Description
H4	Knowledge Management --> Value Co-Creation --> Entrepreneurial Performance	0.132	0.143	Not Mediating

Table 2. Hypothesis Test Results for Mediation Effect

Source: AMOS Version 24 Results, Processed by the Study team (2024)

According to Table 2, value co-creation did not mediate the effect of knowledge management on entrepreneurial performance. This was shown through the path coefficient (estimate) of 0.132 and p-value (P) of 0.143 (≥ 0.05). Therefore, the fourth hypothesis (H4) was rejected or the data did not support the hypothesis.

Results and Discussion

Based on the analysis results, knowledge management had a positive and statistically significant effect on entrepreneurial performance. This result was consistent with Cai Li (2020) with held in the business industry. The ability to share knowledge as an indicator of knowledge management that was proven to improve company performance (Li et al., 2020). This result was also following Qader (2022) with entrepreneurs in the textile SME sector in China that the behavior of sharing knowledge and information had been proven to improve organizational performance (Qader et al., 2022). Another study that also consistently supported this study was Feng (2022) on 253 companies in China as a sample. The results showed that knowledge management capabilities through knowledge absorption, transfer, and application had a positive effect on improving innovation performance (Feng et al., 2022).

Based on the explanation, it could be concluded that knowledge management had a positive and significant effect on entrepreneurial performance in both educational and business institutions. Knowledge management capabilities were proven to improve the performance of entrepreneurship programs through knowledge-sharing activities, innovative services, and building partnerships with various parties and professionals to obtain information and knowledge that supported school activities.

Following analysis results, knowledge management was proven to increase value co-creation. These results strengthened Ranjbarfard's (2018) study at universities in Iran with student and lecturer respondents (Ranjbarfard & Heidari Sureshjani, 2018). The practice of knowledge management by building an active learning environment could create collaborative learning services as the expected shared value. These results further strengthened Zhang et al (2019) in the digital application development business in China. The practice of knowledge management through knowledge sharing and the ability to accept new knowledge had a positive effect on value co-creation in the digital application development business (H. Zhang et al., 2019). Organizations exhibiting the knowledge, information, various recommendations, and the ability to interact with several parties could create shared value.

In this study, schools that could manage knowledge and information improved their ability in the process of sharing knowledge and information with various parties and receiving various ideas, suggestions, as well as input from stakeholders, therefore aligning services according to stakeholders' expectations. Based on these explanations, it could be concluded that knowledge management had a positive effect on increasing value co-creation in both the educational and business industries.

Based on the analysis results, value co-creation had not statistically significant effect on entrepreneurial performance in schools, although this hypothesis was built on several previous studies that showed value co-creation had positive effect on increasing entrepreneurial performance (T. Van Trang & Do, 2020) and (Chao et al., 2019). Based on this study, value co-creation had different effects on business and educational institutions. In business institutions, value co-creation had been shown to improve performance, while in educational institutions value co-creation had no effect to improve performance.

According to the mediated analysis results, value co-creation did not mediate the effect of knowledge management on entrepreneurial performance. Knowledge management could directly improve entrepreneurial performance without having to go through value co-creation activities. This hypothesis was built based on previous studies that knowledge management could have a direct and indirect effect on entrepreneurial performance (Li et al., 2020; Qader et al., 2022; Hussain & Li, 2022). According to this study, it could be concluded that knowledge management could have a direct effect on entrepreneurial performance in educational institutions without being mediated by value co-creation.

Conclusions and Recommendation

In conclusion, educational institutions in this case schools needed to know that entrepreneurial performance was important to improve because schools were public service institutions that must function with an innovative entrepreneurial approach to develop and progress. This was because innovation and creativity were needed in managing institutions in situations and environments with current technological developments.

Schools were one example of institutions that needed to make efforts to encourage increased entrepreneurship. This was consistent with Rusu (2022) of 27 European Union countries for 12 years, proving that entrepreneurial performance had an important role in increasing economic growth in various countries in the world (J.Acs, Zoltan; Audretsh, 2011). Entrepreneurial activities were important to perform in schools because these contributed to driving progress, encouraging innovation, creating jobs, and increasing economic growth.

These results also proved that entrepreneurial performance could increase when affected by the schools' ability in knowledge management. Knowledge management was carried out through sharing knowledge; providing innovative services; as well as building partnerships with professionals and various parties to obtain diverse new information and knowledge that supported school activities. Other supporting activities included schools using technology to store various knowledge and information in various technology platforms, dashboards, Google Drive, microsites, and clouds. This knowledge management activity was a form of school awareness to adapt to various environmental changes to support educational services.

This study also proved that knowledge management can improve the value co-creation. Through knowledge management, school could create collaboration between school and stakeholders to build value co-creation in schools. Value co-creation in the context of this study was the ability of schools to actively empower stakeholders (committees, parents, regency/education offices, partners, and communities) to be involved in various activities to ensure the creation of shared value to improve education services.

The results of this study fill the gap due to the limitations of previous research that has been done in the business industry. This study has proven to develop knowledge related to the knowledge management, value co-creation and entrepreneurial performance in the education industry. Due to the limitations of the study, the authors recommend further studies on different samples in the educational industry, to provide more references related to knowledge management, value co-creation and entrepreneurial performance.

References

- Alves, H. (2013). Co-creation and innovation in public services. *Service Industries Journal*, 33(7–8), 671–682. <https://doi.org/10.1080/02642069.2013.740468>
- Bandur, A. (2020). *Proposal Penelitian Mixed-Methods: Desain dan Teknik Penulisan*. Penerbit Mitra

- Wacana Media.
- Bandur, A. (2021). *Penelitian Kuantitatif Metodologi, Desain, dan Analisis Data dengan SPSS, Amos, & NVIVO*.
- Baron, R. A. (2004). Potential benefits of the cognitive perspective: Expanding entrepreneurship's array of conceptual tools. *Journal of Business Venturing*, 19(2), 169–172. [https://doi.org/10.1016/S0883-9026\(03\)00004-1](https://doi.org/10.1016/S0883-9026(03)00004-1)
- Benevene, P., Dal Corso, L., De Carlo, A., Falco, A., Carluccio, F., & Vecina, M. L. (2018). Ethical leadership as antecedent of job satisfaction, affective organizational commitment and intention to stay among volunteers of non-profit organizations. *Frontiers in Psychology*, 9(NOV). <https://doi.org/10.3389/fpsyg.2018.02069>
- Chandler, G. N., & Hanks, S. H. (1993). Measuring the performance of emerging businesses: A validation study. *Journal of Business Venturing*, 8(5), 391–408. [https://doi.org/10.1016/0883-9026\(93\)90021-V](https://doi.org/10.1016/0883-9026(93)90021-V)
- Chao, Z., Weidong, Z., Yong, W., Danli, W., Hangbing, Z., & Xiaoya, D. (2019). Can Manufacturing Service Value Co-Creation Improve Business Performance in the Internet Era? *IEEE Access*, 7, 120360–120374. <https://doi.org/10.1109/ACCESS.2019.2937879>
- Creswell, J. W. (2014). *Research Design Qualitative, Quantitative and Mixed Methods Approaches*. In SAGE (Fourth Ed). SAGE Publications Inc. <https://doi.org/10.1063/1.1150549>
- Drucker, P. F. (1985). *Innovation and Entrepreneurship Practice and Principles*. In วารสารวิชาการมหาวิทยาลัยศรีนครินทรวิโรฒ. HarperCollins Publishers.
- Epezagne Assamala, I. R., Li, W., Ashraf, S. F., Syed, N., Di, H., & Nazir, M. (2022). Mediation-Moderation Model: An Empirical Examination of Sustainable Women Entrepreneurial Performance towards Agricultural SMEs in Ivory Coast. *Sustainability (Switzerland)*, 14(10). <https://doi.org/10.3390/su14106368>
- Feng, L., Zhao, Z., & Wang, J. (2022). The Impact of Knowledge Management Capabilities on Innovation Performance from Dynamic Capabilities Perspective : Moderating the Role of Environmental Dynamism.
- Gallagher, D., Ting, L., & Palmer, A. (2008). A journey into the unknown; taking the fear out of structural equation modeling with AMOS for the first-time user. *The Marketing Review*, 8(3), 255–275. <https://doi.org/10.1362/146934708x337672>
- Hair, J., Black, W., Babin, B., & Anderson, R. (2014). *Multivariate Data Analysis (Seventh Ed)*. Perason Education Limited.
- Haryono, S. (2013). *Structural Equation Modeling*. In *The International Encyclopedia of Communication*. PT Intermedia Personalia Utama. <https://doi.org/10.1002/9781405186407.wbiecs108>
- Hoyer, W. D., Chandy, R., Dorotic, M., Krafft, M., & Singh, S. S. (2010). Consumer cocreation in new product development. *Journal of Service Research*, 13(3), 283–296. <https://doi.org/10.1177/1094670510375604>
- Hussain, N., & Li, B. (2022). Entrepreneurial Leadership and Entrepreneurial Success: The Role of Knowledge Management Processes and Knowledge Entrepreneurship. *Frontiers in Psychology*, 13(March). <https://doi.org/10.3389/fpsyg.2022.829959>
- J.Acs, Zoltan; Audretsh, D. B. et al. (2011). Growth and entrepreneurship. *Small Business Economics*, 39(24), 289–300. <https://doi.org/10.1007/s11187-010-9307-2>
- Kandpal, J., Baroda, Dr. S., & Sharma, C. (2018). 360 Degree Feedback Appraisals- An Innovative Approach of Performance Management System. *International Journal of Management & Information Technology*, 1(2), 53–66. <https://doi.org/10.24297/ijmit.v1i2.1447>
- Kantur, D. (2016). Strategic entrepreneurship: mediating the entrepreneurial orientation-performance link. *Management Decision*, 54(1), 24–43. <https://doi.org/10.1108/MD-11-2014-0660>

- Kemendikbud. (2015). Hasil Uji Kompetensi Kepala Sekolah dan Pengawas Tahun 2015. Kemendikbud.
- Kohler, T., Fueller, J., Matzler, K., & Stieger, D. (2011). CO-creation in virtual worlds: The design of the user experience. *MIS Quarterly: Management Information Systems*, 35(3), 773–788.
<https://doi.org/10.2307/23042808>
- Li, C., Ashraf, S. F., Shahzad, F., Bashir, I., & Murad, M. (2020). Influence of Knowledge Management Practices on Entrepreneurial and Organizational Performance : A Mediated-Moderation Model. *Frontiers Media S.A.*, 11(December), 1–15. <https://doi.org/10.3389/fpsyg.2020.577106>
- Masadeh, R., Almajali, D. A., Alrowwad, A., & Obeidat, B. (2019). The role of knowledge management infrastructure in enhancing job satisfaction: A developing country perspective. *Interdisciplinary Journal of Information, Knowledge, and Management*, 14, 1–25. <https://doi.org/10.28945/4169>
- Miao, C., Qian, S., & Ma, D. (2017). The Relationship between Entrepreneurial Self-Efficacy and Firm Performance: A Meta-Analysis of Main and Moderator Effects. *Journal of Small Business Management*, 55(1), 87–107. <https://doi.org/10.1111/jsbm.12240>
- Otchere, Samuel; Addy, Winfred; Hongyun, T. (2019). The Effect of Value Co-creation on Innovation Performance: The Mediating Role of Customer Perceived Value. <https://doi.org/10.7176/EJBM/11-27-05>
- Payne, A. F., Storbacka, K., & Frow, P. (2008). Managing the co-creation of value. *Journal of the Academy of Marketing Science*, 36(1), 83–96. <https://doi.org/10.1007/s11747-007-0070-0>
- Prahalad, C. K., & Ramaswamy, V. (2004). Co-creating unique value with customers. *Strategy & Leadership*, 32(3), 4–9. <https://doi.org/10.1108/10878570410699249>
- Pu, B., Ji, S., Sang, W., & Tang, Z. (2022). Entrepreneurial Leadership and Entrepreneurial Performance in Start-Ups: A Moderated Serial Mediation Model. *Frontiers in Psychology*, 13(February), 1–12. <https://doi.org/10.3389/fpsyg.2022.831555>
- Qader, A. A., Zhang, J., Ashraf, S. F., Syed, N., Omhand, K., & Nazir, M. (2022). Capabilities and Opportunities : Linking Knowledge Management Practices of Textile-Based SMEs on Sustainable Entrepreneurship and Organizational Performance in China.
- Ranjan, K. R., & Read, S. (2014). Value co-creation: concept and measurement. *Journal of the Academy of Marketing Science*, 44(3), 290–315. <https://doi.org/10.1007/s11747-014-0397-2>
- Ranjbarfard, M., & Heidari Sureshjani, M. (2018). Offering a framework for value co-creation in virtual academic learning environments. *Interactive Technology and Smart Education*, 15(1), 2–27. <https://doi.org/10.1108/ITSE-08-2017-0040>
- Rönnerberg Sjödin, D., Parida, V., & Wincent, J. (2016). Value co-creation process of integrated product-services: Effect of role ambiguities and relational coping strategies. *Industrial Marketing Management*, 56, 108–119. <https://doi.org/10.1016/j.indmarman.2016.03.013>
- Rusu, V. D., Roman, A., Tudose, M. B., & Cojocaru, O. M. (2022). An Empirical Investigation of the Link between Entrepreneurship Performance and Economic Development: The Case of EU Countries. *Applied Sciences (Switzerland)*, 12(14). <https://doi.org/10.3390/app12146867>
- Sedgwick, P. (2015). Multistage sampling. *BMJ (Online)*, 351(August). <https://doi.org/10.1136/bmj.h4155>
- Sekaran, U. (2016). *Research Methods for Business*. John Wiley and Sons Ltd.
- Siregar, Z. M. E., Suryana, Ahman, E., & Senen, S. H. (2020). Knowledge management, innovation, and firm performance: the case of batik industry in indonesia. *Quality - Access to Success*, 21(179), 27–32.
- Sun, D., Yao, W., & Sun, B. (2022). The Knowledge Service Model of Technology-Based SMEs from the Perspective of Value Cocreation. *Wireless Communications and Mobile Computing*, 2022, 1–17. <https://doi.org/10.1155/2022/8118684>
- Trang, S., Mandrella, M., Marrone, M., & Kolbe, L. M. (2022). Co-creating business value through IT-

- business operational alignment in inter-organisational relationships: empirical evidence from regional networks. *European Journal of Information Systems*, 31(2), 166–187.
<https://doi.org/10.1080/0960085X.2020.1869914>
- Tshiaba, S. M., Wang, N., Ashraf, S. F., Nazir, M., & Syed, N. (2021). Measuring the sustainable entrepreneurial performance of textile-based small–medium enterprises: A mediation–moderation model. *Sustainability (Switzerland)*, 13(19). <https://doi.org/10.3390/su131911050>
- Van Trang, T., & Do, Q. H. (2020). Critical success factors of TQM implementation in vietnamese supporting industries. *Journal of Asian Finance, Economics and Business*, 7(7), 391–401.
<https://doi.org/10.13106/jafeb.2020.vol7.no7.391>
- Wang, X., Gu, Y., Ahmad, M., & Xue, C. (2022). The Impact of Digital Capability on Manufacturing Company Performance. *Sustainability (Switzerland)*, 14(10), 1–24.
<https://doi.org/10.3390/su14106214>
- Wang, Z., Xu, S., Sun, Y., & Liu, Y. (2019). Transformational leadership and employee voice: an affective perspective. *Frontiers of Business Research in China*, 13(1). <https://doi.org/10.1186/s11782-019-0049-y>
- Wiścicka-Fernando, M., Misiak-Kwit, S., & Fernando, K. S. D. (2019). Co-Creation as an innovative way to develop an enterprise-cross-country analysis. *Sustainability (Switzerland)*, 11(23), 1–13.
<https://doi.org/10.3390/su11236737>
- Zhang, H., Gupta, S., Sun, W., & Zou, Y. (2019). How social-media-enabled co-creation between customers and the firm drives business value? The perspective of organizational learning and social Capital. *Information and Management*, 57(3), 103200. <https://doi.org/10.1016/j.im.2019.103200>
- Zhang, Y., Zhang, M., Luo, N., Wang, Y., & Niu, T. (2019). Understanding the formation mechanism of high-quality knowledge in social question and answer communities: A knowledge co-creation perspective. *International Journal of Information Management*, 48(January), 72–84.
<https://doi.org/10.1016/j.ijinfomgt.2019.01.022>
- Zhou, Z., Liu, Y., Yu, H., & Ren, L. (2020). The influence of machine learning-based knowledge management model on enterprise organizational capability innovation and industrial development. 1–15. <https://doi.org/10.1371/journal.pone.0242253>.