

Nurturing Creativity through Innovation: A Leadership Study from Perak Educators

Amrina Rosyada Binti Abdullah, Dayang Rafidah Syariff M. Fuad*

University Pendidikan Sultan Idris, Malaysia

*Corresponding Author: dayang@fpe.upsi.edu.my

DOI: <https://dx.doi.org/10.47772/IJRISS.2025.905000325>

Received: 06 May 2025; Accepted: 14 May 2025; Published: 13 June 2025

ABSTRACT

The rapid advancement of the Fourth Industrial Revolution (IR 4.0) and the integration of digital technologies have catalysed significant transformation within Malaysia's national education system to fulfil contemporary demands. To enhance educational quality, teacher creativity has emerged as a critical component in cultivating future-ready students equipped with innovative and critical thinking skills. It is widely acknowledged that teacher creativity can be fostered by implementing innovative leadership practices by school principals. Numerous studies have indicated that innovative leadership improves educational outcomes as a contemporary leadership paradigm. Nevertheless, empirical research exploring the relationship between innovative leadership and teacher creativity remains limited. In response to this gap, a study examined how innovative leadership among school leaders influences teacher creativity. The study involved 331 Muallim and Batang Padang, Perak district primary school teachers. The research design of this study is descriptive and inferential quantitative, utilizing a survey method through the distribution of a questionnaire consisting of 69 items. The results indicated that school leaders in the selected districts demonstrated high innovative leadership ($M = 7.49$). At the same time, teacher creativity was also reported at a high level ($M = 7.84$). The analysis demonstrated a strong positive correlation between innovative leadership and teacher creativity ($r = .747$, $p < .05$). The findings also revealed that the innovative leadership of school principals significantly influenced teacher creativity, with a coefficient of determination (R^2) of 0.558. These findings reinforce the assertion that innovative leadership practices among school leaders are pivotal in nurturing and enhancing teacher creativity, which is vital for driving educational transformation in the 21st century.

Keywords: Innovative leadership, teachers' creativity, school leadership, school transformation, 21st century

INTRODUCTION

The concept of creativity has been extensively examined by scholars for over a century, with pioneering studies by Terman (1925), Wallas (1926), and Lehman (1953). Despite the passage of time, creativity remains a focal point of research due to its complex nature, encompassing cognitive abilities, personality traits, motivation, and several other factors. Over the years, the scope of creativity research has narrowed to focus on specific fields, with varying definitions of creativity depending on the discipline. In the context of education, Marzidi et al. (2023) assert that teacher creativity in the teaching and learning process (PdPc) is primarily concerned with the strategies employed by educators to capture students' interest in the subject matter. This, in turn, facilitates the achievement of educational objectives, ensuring that teaching becomes more meaningful and effective for students.

The emphasis on creativity in the nation's education system became more pronounced with the introduction of 21st Century Learning (PAK21) in 2013. In 2014, the Ministry of Education Malaysia (KPM) called for all schools to implement PAK21 practices, urging teachers to adopt new teaching methods aligned with its core principles. PAK21 highlights four key elements for developing well-rounded students: communication, collaboration, creativity, and critical thinking (Nur Adibah et al., 2021). The Malaysia Education Development Plan (PPPM) 2013-2025 also advocates for educational reforms focused on improving quality and management efficiency. These reforms emphasise higher-order thinking skills (KBAT), integrating information and communication technology (ICT) in education, and programs to further enhance students' ICT and innovation

skills. PPPM also calls for the curriculum to focus on 21st-century skills such as creativity, innovation, problem-solving, critical thinking, and communication to ensure students can compete globally (Nagaretnam & Mahmud, 2022).

Thus, the government's strong efforts to foster creative thinking in students can be addressed through the creative teaching practices of school teachers (Marzidi et al., 2023). Teachers play a crucial role in implementing these reforms, as they are seen as agents of change in education. For instance, Chuah and Mydin (2022) suggest that teachers should encourage students to think outside the box to develop their analytical, critical, and innovative thinking skills. This is essential to help students stay competitive in the current advancements and to make lessons more engaging (Rais et al., 2022). Teachers are also urged to be more creative in their teaching methods to ensure effective, efficient, and productive learning, thus improving the overall quality of education (Susilo & Sofiarini, 2020). According to Zhu and Zhang (2019), teachers with creative behaviours tend to have more open minds, expect change, and are more willing to take risks. Teacher creativity is vital for engaging students and achieving teaching objectives (Marzidi et al., 2023). Without creative teaching practices, the knowledge transfer process can be limited, negatively impacting student learning. While creativity cannot be directly taught, it can be fostered indirectly through well-planned teaching activities (Sabri et al., 2020). Creative teaching helps students think outside the box. Teachers play a key role in designing effective teaching methods that ensure educational goals are optimally achieved (Norazilawati Abdullah, 2021).

However, teacher creativity is often constrained by factors such as strict curriculum regulations, high workloads, and lack of support from school administrators (Amabile, 1996). To cultivate teacher creativity, innovative school leadership must be emphasised. Innovative leadership encourages creative thinking, flexibility, and the courage to try new approaches to improve organisational effectiveness (Yukl, 2013). In education, the innovative leadership of school leaders includes promoting creative teaching practices, professional development for teachers, and creating a work culture that supports innovation (Fullan, 2007). Previous studies have shown that while principal leadership plays a significant role in educational innovation, a gap exists in understanding how innovative leadership influences teacher creativity. Therefore, this study empirically examines the relationship between innovative leadership among school principals and the level of creativity among teachers in primary schools in Tanjong Malim and Batang Padang, Perak.

Through this study, the researcher would like to answer the following research questions:

1. What is the level of principals' innovative leadership in primary schools in Tanjong Malim and Batang Padang, Perak?
2. What is the level of teachers' creativity in primary schools in Tanjong Malim and Batang Padang, Perak?
3. Is there a relationship between principals' innovative leadership and teachers' creativity in primary schools in Tanjong Malim and Batang Padang, Perak?
4. Do principals' innovative leadership influence teachers' creativity in primary schools in Tanjong Malim and Batang Padang, Perak?

METHODOLOGY

This section presents the research procedure, including participant selection, research instrument, and data analysis techniques.

Participant Selection

Three hundred thirty-one teachers from 51 urban-status primary schools in Muallim and Batang Padang, Perak, participated in this study. Before the investigation, all participants agreed to sign a consent form and 331 valid surveys from 51 schools were collected. The respondents were selected through simple random sampling with the assistance of Microsoft Excel software.

Research Instrument

This study employed a quantitative research design using the survey method. Based on data collected through

questionnaire distribution, descriptive analysis was conducted to examine the level of innovative leadership among principals and teachers' creativity. The questionnaire for this study is divided into three sections. The first section covers the respondents' profiles, the second focuses on the innovative leadership of principals, and the third addresses teachers' creativity.

In examining the influence of innovative leadership on teacher creativity, this study combines two leadership theories, namely transformational leadership and visionary leadership. The combination of these theories aligns with the statements made by Ancona et al. (2001), Gupta et al. (2006), and Oluwefemi et al. (2019), who argue that effective traditional leadership theories, which govern routine behaviours, must be combined with contemporary leadership theories to lead innovative behaviours. A review of the literature from Punnanan (2022) revealed that no single theory explicitly explains innovative leadership. However, its foundation is built upon several theories, including Path-Goal Theory, Leader-Member Exchange Theory, and Transformational Leadership Theory.

So, to answer the research question, this study adapted the theoretical framework proposed by Burns (1978) and Bass (1985), which comprises four dimensions: idealised influence, individualised consideration, intellectual stimulation, and inspirational motivation. Meanwhile, the visionary leadership theory is adapted from the study by Daniel Goleman (2002), which consists of four dimensions: visionary, affiliative, democratic, and coaching.

This study utilises the theoretical framework on creativity proposed by Cropley (1997) to assess teachers' creativity. Cropley outlined nine dimensions that can be employed to evaluate teachers' creativity: freedom, integration, motivation, judgment, flexibility, evaluation, questioning, opportunity, and frustration. These dimensions serve as key indicators for understanding and measuring the multifaceted nature of creativity within the teaching profession. Fig. 1 shows the theoretical framework of this study.

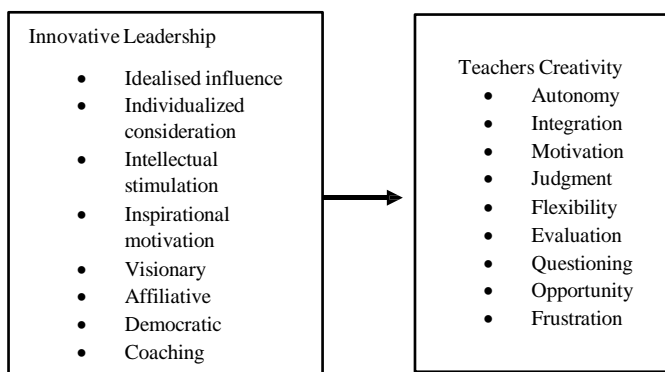


Fig 1. Theoretical framework

Data Analysis

The collected data were analysed using the Statistical Package for Social Sciences (SPSS) 26. The statistical test for significance level was set as $p < 0.05$. Descriptive analyses, Pearson's correlation, and linear regression analyses were performed to examine the collected data. The findings of this study were also examined through four aspects: the level of innovative leadership among principals, the level of teachers' creativity, the relationship between principals' innovative leadership and teachers' creativity, and the influence of the principals' innovative leadership on teachers' creativity.

Before analysing the data for each question, the validity and reliability of the items were assessed. Data validity was determined by five experts in the field of leadership, with an acceptable Item Content Validity Index (ICVI) value of >0.80 (Lynn, 1986). This study met the validity criteria, with innovative leadership recording an SCVI value of 0.97 and teachers' creativity recording an SCVI value of 0.99. Then, the reliability of the items was assessed using Cronbach's alpha values, which should exceed 0.70 (Robinson et al., 1991). The study met Robinson's recommendation, with the principals' innovative leadership recording a Cronbach's alpha value of 0.910 and teachers' creativity recording a value of 0.916.

RESULTS

The data analysis was conducted on 323 respondents after eight were found to be outliers based on the preliminary analysis of the raw data. Table 1 shows the demographic profile of this study.

Table 1 Respondents' Demographics

Demographics	Category	Frequency	Percentage
Gender	Male	111	34.4
	Female	212	65.6
Academic Qualification	Diploma	17	5.3
	Bachelor's Degree	242	74.9
	Master's Degree	62	19.2
	Doctorate	2	0.6
Years of Service in Education	Less than 1 year	5	1.5
	1-10 years	140	43.3
	11-20 years	97	30.0
	21-30 years	41	12.7
	More than 31 years	40	12.4
Years of Service in Current School	Less than 1 year	32	9.91
	1-3 years	116	35.91
	4-6 years	107	33.13
	More than 7 years	68	21.05

This study employed a 10-point Likert scale, with the interpretation of the mean scores adapted from the study by Koh (2014). Table 2 presents the mean values and the reference for interpreting the implementation level.

Table 2 Mean Values and the Reference for Interpretation of the Implementation Level

Mean Values	Interpretation
1.00 – 4.00	Low
4.01 – 7.00	Moderate
7.01 – 10.00	High

Principals' Innovative Leadership

Preliminary studies proposed eight dimensions for measuring innovative leadership: idealised influence, intellectual stimulation, inspirational motivation, individualised consideration, vision, affiliative, democratic and coaching. However, following validation, this study identified only six dimensions as effective in measuring the innovative leadership of principal within the study area—namely, inspirational motivation, vision, idealised influence (behaviour), coaching, idealised influence (attributed) and individualised consideration. After conducting Principal Component Analysis (PCA) analysis, the idealised influence was divided into the idealised influence (attribute) and idealised influence (behaviour). Table 3 shows the result of the principals' innovative leadership at the study location by dimension.

Table 3 The Level of Principals' Innovative Leadership

Dimension	Mean	Standard Deviation	Mean Interpretation
Inspirational Motivation	8.70	0.82	High
Vision	8.17	1.03	High
Idealised Influence (Behaviour)	8.06	0.90	High
Mentoring	8.04	1.05	High
Idealised Influence (Attribute)	7.56	1.29	High
Individualised Consideration	7.49	1.39	High
Average Mean	7.49	0.97	High

Based on Table 3, the study revealed that the level of innovative leadership among principals in the study area was at a high level. This is demonstrated through the average mean score of 7.49 and standard deviation of 0.97. The findings also indicate that the dimension of inspirational motivation was the most highly practised by principals compared to other dimensions, with a mean score of 8.70. This suggests that the principal effectively influences teachers' motivation through an optimistic communication style, a clear articulation of the school's mission, a demonstrated confidence in achieving set goals, and a consistent practice of making decisions through consultation with the teaching staff."

Teachers' Creativity

Based on previous studies, the initial theoretical framework proposed nine dimensions for measuring teacher creativity: autonomy, integration, motivation, judgment, flexibility, evaluation, questioning, opportunity and frustration. However, following validation and Principal Component Analysis (PCA), the study identified only five dimensions as relevant for assessing teacher creativity in the study context: opportunity, integration, frustration, questioning, and evaluation. Table 4 shows the result of the teachers' creativity in Muallim and Batang Padang district.

Table 4 The Level of Teachers' Creativity

Dimension	Mean	Standard Deviation	Mean Interpretation
Opportunity	9.09	0.51	High
Integration	8.95	0.61	High
Frustration	8.67	0.73	High
Questioning	7.46	1.23	High
Evaluation	5.07	1.67	Moderate
Average	7.84	0.68	High

Based on Table 4, teachers' creativity was reported to be high, with an average mean score of 7.84 and a standard deviation of 0.68. Teachers were found to practise the opportunity aspect more frequently in their creative teaching, with this dimension recording a mean score of 9.09. These findings indicate that teachers practice creative teaching in the teaching and learning process by consistently providing students with opportunities to explore new and diverse ideas, encouraging them to present their work to the teacher, emphasising foundational instruction, and creating space for students to seek creative solutions independently. This approach fosters the development of creative and critical students, aligning with the principles of 21st-century teaching, which aim to cultivate innovative and critical thinkers in problem-solving processes, while also nurturing communication and collaboration among students.

The Relationship of Innovative Leadership and Teachers' Creativity

This study utilises Pearson correlation analysis to investigate the relationship between innovative leadership and teachers' creativity. The results of the correlation analysis are displayed in Table 5.

Table 5 Relationship Between Principals' Innovative Leadership And Teachers' Creativity

Variables		Innovative Leadership	Teachers' Creativity
Innovative Leadership	Pearson Correlation	1	.747
	Sig. (2-tailed)		.000
	N	323	323
Teachers' Creativity	Pearson Correlation	.747	1
	Sig. (2-tailed)	.000	
	N	323	23

The findings of this study demonstrate a strong and statistically significant relationship between principals' innovative leadership and teachers' creativity, as indicated by the correlation coefficient value ($r = .747$, $p < 0.05$). This suggests that the more innovative the leadership practices demonstrated by the principal, the more creative the teachers tend to be in their teaching approaches. The dimension of inspirational motivation, which recorded the highest mean among the leadership constructs, may have played a key role in encouraging teachers to explore new ideas and foster creative learning environments. Therefore, it can be concluded that innovative leadership influences principal effectiveness and plays a crucial role in nurturing creativity among teaching staff.

The Impact of Innovative Leadership Towards Teachers' Creativity

A linear regression analysis examined how principals' innovative leadership predicts teacher creativity. The results of this study's linear regression analysis are presented in Table 6, while Table 7 illustrates the influence of each dimension of principals' innovative leadership on teachers' creativity.

Table 6 Results of the Linear Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.747 ^a	.558	.557	.45359

Predictors: (Constant), Innovative Leadership

The findings revealed an R-squared value of 0.558, indicating that the innovative leadership practices of the principal can explain 55.8% of the variance in teacher creativity. The remaining 44.2% is attributed to other factors not included in the model. The standardised regression coefficient (β) for innovative leadership was 0.524, with a significance value of $p < 0.05$, suggesting a statistically significant positive influence. The constant (intercept) value was 3.644. This implies that for every one-unit increase in innovative leadership, teacher creativity increases by 0.524 units.

Table 7 The Influence of Principals' Innovative Leadership on Teachers' Creativity for Each Dimension

Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.	Result
	B	Std. Error	Beta			
(Constant)	3.979	.305		13.032	.000	

Inspirational Motivation	.007	.054	.009	.139	.890	Not significant
Vision	.127	.059	.193	2.160	.032	Significant
Idealised Influence (Behaviour)	.117	.041	.154	2.838	.005	Significant
Mentoring	-.018	.074	-.028	-.250	.803	Not significant
Idealised Influence (Attribute)	.179	.047	.340	3.844	.000	Highly significant
Individualised Consideration	.081	.041	.165	1.976	.049	Significant

Dependent variable: Teachers' Creativity

Based on Table 7, the dimension of idealised influence (attribute) exhibits the most dominant influence on teachers' creativity, with the highest beta value ($\beta = 0.340$, $p = 0.001$). The second dimension with a high influence value is vision ($\beta = 0.154$, $p = 0.032$), followed by idealised influence (behaviour) ($\beta = 0.154$, $p = 0.005$) and individualised consideration ($\beta = 0.165$, $p = 0.049$). All these dimensions demonstrate a significant and positive relationship with teachers' creativity. In contrast, two dimensions, namely inspirational motivation ($p = 0.890$) and mentoring ($p = 0.803$), do not show a significant relationship with teachers' creativity. Nevertheless, overall, the results of the multiple regression analysis indicate that several dimensions of innovative leadership significantly influence teachers' creativity.

DISCUSSION

The findings of this study reveal that the principal at the research site demonstrates a high level of innovative leadership. This aligns with the work of Ismail et al. (2021), who studied 477 teachers across various secondary schools in Malaysia. Their research found that school leaders most frequently exhibited inspirational motivation more than intellectual stimulation or individualised consideration. Similarly, Ripki et al. (2020) identified inspirational motivation as the second most practised leadership dimension among school leaders, noting its strong connection to teachers' creativity. Inspirational motivation refers to a leader's ability to uplift and energise others, building confidence and inspiring team members to go beyond their limits. Leaders who excel in this dimension often articulate a compelling vision, instil optimism, and promote a strong sense of shared purpose (Ravikumar, 2017). Such leadership qualities encourage better performance and create an environment where creativity can flourish.

In response to the second research question, the study also found that teachers at the research site exhibit high creativity. One key aspect contributing to this is the opportunity dimension; teachers actively encourage students to explore, experiment, and utilise various learning resources. This finding is consistent with Soh (2000), who found that opportunity played a significant role in shaping teacher creativity, accounting for approximately 59.49% of the variance in his study. By allowing students to express themselves and explore different viewpoints, teachers effectively open pathways for creative learning (Marzidi et al., 2023). These findings strongly connect principals' innovative leadership and teachers' creativity. Teachers are likelier to implement creative teaching strategies in schools where principals effectively practise innovative leadership. This conclusion echoes findings from other studies. For instance, Vermeulen et al. (2022) found that innovative leadership contributes significantly to sustainable education quality. Similarly, research by Chen and Yuan (2021) in Taiwan revealed a positive correlation between school leaders' innovative leadership and teacher creativity. Johari et al. (2021) also reported that when principals support teachers through innovative leadership, it fosters a school climate that encourages creative thinking and collaboration.

From a statistical perspective, this study found that principals' innovative leadership explained 55.5% of the variance in teachers' creativity ($R^2 = 0.555$). This suggests that over half of the changes in teacher creativity levels can be attributed to how effectively a principal exercises innovative leadership. This result is consistent

with Makhrus et al. (2022), whose study showed that innovative leadership accounted for 49.8% of teacher creativity. Likewise, Al-Husseini et al. (2021) found that universities in Iraq experienced higher levels of creativity when led by innovative leaders, particularly those who demonstrated idealised influence; a core trait of transformative and innovative leadership. This study supports the growing evidence that innovative leadership uplifts school leadership practices and is crucial in cultivating a creative teaching environment. Principals who embody innovative leadership principles can significantly enhance the creative capacities of their teachers, ultimately contributing to a richer, more dynamic educational experience for students.

CONCLUSION

This study confirms that innovative leadership has the potential to influence and is believed to enhance teacher creativity when effectively practised by school leaders. Teacher creativity is a crucial element to be integrated into the learning process, as it not only fosters forward-thinking students but also better prepares them to face future challenges while contributing to improving national education quality. Incorporating creativity in education nurtures students' problem-solving skills through diverse materials and approaches, as envisioned in Education 4.0. This aims to produce a new generation of highly competitive professionals who can effectively utilise physical and digital resources to develop innovative solutions for current and future societal challenges (Ramírez-Montoya et al., 2022). In addition, the Malaysian Education Development Plan (PPPM) 2013–2025 emphasises mastery of 21st-century skills such as creativity and innovation, problem-solving, critical thinking, and communication, to ensure students can compete globally (Nagaretnam & Mahmud, 2022). These goals are believed to be attainable through the implementation of creative teaching by educators (Marzidi et al., 2023). Creative teaching practices, supported by innovative school leadership, will open new dimensions of thinking for students by introducing school programs that challenge their cognitive abilities. Therefore, innovative leadership and the implementation of creative teaching should be cultivated at the primary school level to elevate the standard of national education.

This study provides practical implications for the national education system by recommending that the Ministry of Education develop an innovative leadership model for school leaders and enhance existing teacher training programs to foster greater creativity and innovation among teachers. This study is limited to two districts in Perak. Therefore, further research could be conducted on a larger scale, such as covering all states in Malaysia, to explore the variation in findings that explain how the innovative leadership of school leaders can influence teachers' creativity. This study examines innovative leadership as a factor that influences teachers' creativity. Therefore, further research can be conducted by exploring other factors that can enhance teachers' creativity, such as demographic, individual, and organizational factors (Pazin et al., 2022).

REFERENCE

1. Abdullah, A., Idris, J., & Silahudin. (2024). Innovative leadership of Madrasah Aliyah principals in enhancing educational quality in Pidie, Aceh Province. *Lentera Pendidikan: Journal Ilmu Tarbiyah dan Keguruan*, 27(2), 300-318.
2. Alharbi, I. B. A. (2021). Innovative leadership: A literature review paper. *Open Journal of Leadership*, 10(3), 214-229.
3. Al-Husseini, S., El Beltagi, I., & Moizer, J. (2021). Transformational leadership and innovation: the mediating role of knowledge sharing amongst higher education faculty. *International Journal of Leadership in Education*, 24(5), 670-693.
4. Apak, J., & Taat, M. S. (2018). Hubungan Tingkah Laku Pemupukan Creativity Guru dengan Pengurusan Bilik Darjah Abad Ke-21. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, 3(3), 64-79.
5. Chen, H. H., & Yuan, Y. H. (2021). The study of the relationships of teacher's creative teaching, imagination, and principal's visionary leadership. *Sage Open*, 11(3), 21582440211029932.
6. Cheng, M. Y. V. (2001). Creativity in teaching: Conceptualization, assessment and resources [Unpublished Doctoral Dissertation of Hong Kong Baptist University].
7. Crompton, A. (2020). Creativity-focused technology education in the age of Industry 4.0. *Creativity Research Journal*, 32(2), 184–191.

8. Cropley, D. H., & Oppert, M. L. (2020). Commoditizing creativity. *Encyclopedia of creativity*, 167–171.
9. Gan, C.K., Hamid, A.H.A & Othman, N. (2022). Hubungan antara kepemimpinan transformational pengetua dan kepuasan kerja guru di Sekolah Tinggi Persendirian Cina di Negeri Johor. *Journal Dunia Pendidikan*, 4(3), 97-112.
10. Goleman, D. (2006). The socially intelligent. *Educational leadership*, 64(1), 76–81.
11. Goleman, D., Boyatzis, R. E., & McKee, A. (2013). *Primal leadership: Unleashing the power of emotional intelligence*. Harvard Business Press.
12. Makhdoom, F. N., Elahi, K., Faisal, F., & Tariq, S. (2022). A paradigm shifts of learning innovative leadership in classrooms of Pakistan. *Psychology and Education*, 59(2), 1001-1019.
13. Mei, C. S., & Mydin, A. A. (2022). Pengaruh amalan penyeliaan terhadap pengajaran kreatif guru. *JuPiDi: Journal Kepimpinan Pendidikan*, 9(2), 31-40.
14. Messmann, G., Evers, A., & Kreijns, K. (2022). The role of basic psychological needs satisfaction in the relationship between transformational leadership and innovative work behaviour. *Human resource development quarterly*, 33(1), 29-45.
15. Marzidi, M. K. M., & Halim, H. (2023). Hubungan Amalan Creativity dan Komitmen Guru Pendidikan Seni Visual. *Advances in Humanities and Contemporary Studies*, 4(2), 134-149.
16. Nagaretnam, M., & Mahmud, M. S. (2022). Kesediaan Guru dan Keberkesanan Pelaksanaan Pengajaran Matematik Abad Ke-21 di Sekolah Rendah: Sebuah Tinjauan Literature. *Malaysian Journal of Social Sciences and Humanities (MJSSH)*, 7(11), e001876-e001876.
17. Norazman, M., Ahmad, N. & Latifah, S. (2021). Dimensi Bimbingan dalam Kepimpinan Innovative dan Implikasinya terhadap Keberkesanan Sekolah. *Journal Pendidikan Malaysia*, 46(2), 77–88.
18. OECD. (2016). *Innovating Education and Educating for Innovation: The Power of Digital Technologies and Skills*. OECD Publishing, Paris. <https://doi.org/10.1787/9789264265097-en>
19. Othman, A & Abd Rahman H. (2013). Innovative leadership: learning from Change Management among Malaysian Secondary School Principals. *World Applied Sciences Journal*, 23(2), 167-177.
20. Patston, T. J., Kaufman, J. C., Cropley, A. J., & Marrone, R. (2021). What is creativity in education? A qualitative study of international curricula. *Journal of Advanced Academics*, 32(2), 207–230.
21. Pazin, A. H., Maat, S. M., & Mahmud, M. S. (2022). Factors Influencing Teachers' Creative Teaching: A Systematic Review. *Cypriot Journal of Educational Sciences*, 17(1), 240-254.
22. R. Ravikumar, "Transformational leadership and followers' creativity: Does follower's sex matter?" *J. Humanit. Soc. Sci.*, vol. 22, pp. 32–38, 2017.
23. Ramírez-Montoya, M. S., Castillo-Martínez, I. M., Sanabria-Z, J., & Miranda, J. (2022). Complex thinking in the framework of Education 4.0 and Open Innovation—A systematic literature review. *Journal of Open Innovation: Technology, Market, and Complexity*, 8(1), 4.
24. Soh, K. C. (2000). Indexing creativity fostering teacher behaviour: A preliminary validation study. *The Journal of Creative Behaviour*, 34(2), 118–134.
25. Vermeulen, M., Kreijns, K., & Evers, A. T. (2022). Transformational leadership, leader–member exchange and school learning climate: Impact on teachers' innovative behaviour in the Netherlands. *Educational Management Administration & Leadership*, 50(3), 491-510.