

Enhancing Innovation of Organizations Through Talent Management: A Qualitative Study of Small and Medium Enterprises In Ho Chi Minh City

Tran Huynh Bao¹ and Phan Thi Anh Thu^{1*}

¹ Ho Chi Minh City Open University, Vietnam

*Corresponding author: thu.pta@ou.edu.vn

Abstract: Talent management has been a vital performance component in the business sector. The purpose of this study is to explore how talent management as a product and process innovation stimulator is recognized and implemented by managers in small and medium-sized enterprises in Ho Chi Minh City. Through qualitative research design and thematic analysis, 15 semi-structured interview data were coded and arranged under two general themes and four sub-themes. The results showed that managers perceive the strategic role of talent management. Talent development and talent retention are two factors considered to have noticeable impacts on organizational innovation competencies. Talent management strategies that foster innovation in Small and Medium Enterprises in Ho Chi Minh City can be mentioned: Linking innovation to the Key Performance Indexes of key positions; Internal mentoring programs for young talent groups; Talent retention policies with opportunities to develop new products. Meanwhile, the study also analyzed some businesses that still passively implement talent management, without clearly linking it to innovation. These findings contribute to both academic and practical insights as they shed light on the role of each talent management element in innovation and the need for systematic and effective long-term implementation of talent management in organizational innovation strategies.

Keywords: Talent management, Innovation, SMEs, Ho Chi Minh City.

1 Introduction

Small and medium-sized enterprises (SMEs) are everywhere in the world, regarded as the backbone of the economic structure of developed and developing countries (Keskgn et al., 2010), and Vietnam is not an exception. SMEs, though, lack technological capital and face financial, human capital, and qualification barriers. Hence, they struggle in the early phase of innovating towards sustainable development.

Talent management (TM) has been a pivotal performance component in businesses. Alzuod (2024) stated that the paramount objective of a corporation is to optimize the value of its resources, especially its employees. TM involves finding, developing, evaluating, and retaining employees, putting the right individuals into the right jobs at the right moment. Nonetheless, through different management practices, an effective incorporation of TM, competencies, shared

goals, expertise, empathy, market-oriented consideration, and resources is needed (Vatousios & Happonen, 2021). Aligned with corporate goals, TM practices enhance innovation and improve corporate performance. Highly motivated and high-performing talents add value and support the competitiveness of organizations (Sivasankara et al., 2025). Therefore, effective human resource management practices ensure the suitable development of organizations. Strategic TM thus brings long-term benefits and supports organizations in achieving long-term success in an unpredictable market (Sivasankara et al., 2025).

Innovation is a critical success component for organizations in the contemporary landscape, enabling them to attain expansion and advancement in intricate and competitive settings. Innovation is one of these strengths, necessitating certain skills from both leaders and staff members (Marin-Garcia et al., 2011).

Alzuod (2024) pointed out that talent management and innovation are closely related because the prosperity of innovation largely depends on the contribution of human resources. Some researchers argued that to build creativity in an organization, it is important to have talented employees who have various backgrounds, experiences, and knowledge (Alsakarneh et al., 2023; Mahfouz et al., 2022; Mkhize & Brijball, 2022). Hence, talents are at the core of sustainable competitive advantage and are the drivers of innovation within organizations (Mohammed et al., 2018). TM concentrates on attracting, choosing, cultivating, and retaining personnel possessing the requisite skills, expertise, and capabilities to fulfil the company's objectives.

Although the relationship between talent management and innovation has been debated by many international studies, there is no in-depth research on this matter, especially in small and medium-sized enterprises in Ho Chi Minh City (Vietnam). SMEs tend to lack established HR systems and means, and therefore possess highly contextualized, informal, and experience-driven TM practices. To address this research gap, the present research aims to investigate SME leaders' perspectives and experiences concerning the significance of talent management in fostering innovation. Subsequently, to gain a deeper understanding of the ways SMEs enhance innovation based on TM, this study is expected to provide insights for researchers and professionals concerning the promotion of innovation mechanisms in Ho Chi Minh City, specifically among SMEs.

This paper is devoted to answering the following research questions (RQ): RQ1: How do SMEs in Ho Chi Minh City identify talent management? RQ2: How do SMEs in Ho Chi Minh City implement talent management to enhance innovation?

2 Literature Review

2.1 Talent management

TM encompasses several perspectives contingent upon the business situation, generally categorized under the following basic definitional methods. Chen et al. (2021) delineated that the primary objective of talent management is to allow employees to display higher skills and performance and project these onto the strategic objectives of the organization for its sustainability and growth. Tran (2025) believed that TM entails attracting, retaining, deploying, and developing high-potential staff possessing a range of particular

traits that are deemed important to the organization.

While some asserted that TM is a practice rather than a method, (Alzuod, 2024) opined that others have defined TM as a process primarily including workforce preparation, which includes the formulation of goals, pay budgets, and targets. It also includes recruitment, which integrates both the hiring procedure with assessment (Jose & Asha, 2019). The organizational viewpoint significantly influences global HRM tactics and enhances variations in its practices, particularly in talent management, across diverse corporate contexts (Thite et al., 2021). TM has focused not solely on forming a group of employees but also on selecting and developing talented individuals to unlock their potential (Vatousios & Happonen, 2021). This investigation identifies four characteristics based on Mohammed et al. (2018): "talent attraction, talent training, talent development, and talent retention", which are deemed more suitable for the setting of SMEs in Ho Chi Minh City.

2.2 Innovation

The correlation between innovation and organizational efficiency has been extensively examined in the field of research. Lukiastuti and Kusuma (2021) defined innovation as the extent to which an individual or organization embraces creative concepts prior to others within the same system. Innovation refers to a fresh or substantially enhanced initiative undertaken by a firm to generate value for itself or indirectly for its clients (Aithal, 2023). Moreover, innovation may positively affect firms by improving operating efficiency, reducing costs, or providing new opportunities for expansion and improvement (Sutrisno et al., 2023). In this context, innovation is perceived as an approach for achieving a competitive advantage through the application of novel technologies or methodologies to create new markets or disrupt existing ones.

Specifically, innovation may encompass various elements, including the introduction of new goods or services, novel manufacturing processes, implementation of improvements, and the exploration of fresh markets and vendors within innovative business models of organizations (Alzoud & Dalain, 2023). Alzuod (2020) held the view that firms have been compelled by sustainability issues to implement significant alterations to their products and procedures through innovation. Consequently, innovation correlates positively with the commercial outcomes of firms (Dadzie et al., 2021).

The present investigation adopts two dimensions of

innovation: product innovation and process innovation, based on prior research by Škerlavaj et al. (2010) and Alzuod and Dalain (2023), which are considered more suitable for the context and objectives of SMEs.

2.3 Talent management and innovation

Effective talent management techniques enable organizations to discover and cultivate workers with the potential for innovation, creativity, and progress. Several relevant research findings indicate that innovation plays a pivotal role in attracting talent and integrating diverse technologies, including big data analytics, artificial intelligence, chatbots, social media, video interviews, and teleconferencing, which significantly influence the development of firms by securing qualified staff members in the marketplace (Jose & Asha, 2019). Innovation encompasses not only the generation of new concepts but also the capacity for their successful implementation. Consequently, talent management methods, including training, growth, and career development, can empower individuals to acquire the requisite skills and capabilities to execute creative concepts (Odugbesan et al., 2023; Ibrahim & AlOmari, 2020). Moreover, successful talent management techniques can uncover possible impediments to innovation, like inflexible structures, administrative processes, insufficient interaction, and inadequate management that hinder innovation. Overcoming these challenges can create possibilities for innovation to thrive (Jose & Asha, 2019). Consequently, technology management and innovation are interconnected, necessitating organizations to prioritize both to maintain a sustainable edge in the market. Numerous prior studies have explored the connection between TM and innovation, consistently demonstrating a significant and beneficial connection between the two components across various contexts. Odugbesan et al. (2023), Ibrahim & AlOmari (2020), Jose & Asha (2019), Marin-Garcia et al. (2011), and Mohammed et al. (2018) demonstrated a substantial positive correlation. It is noteworthy to take Abdullah & Abubakar (2017) work into consideration as it suggests that future research should empirically examine talent management across multiple industries, with the potential for others to do the research and validate it in diverse nations. The research aimed to investigate the connection between two variables, TM and innovation. For instance, the study by Ibrahim & AlOmari (2020), which involved 120 staff members in senior and middle management roles within Jordanian banks, revealed that TM exerted an important and beneficial effect on both innovation in products and

processes.

3 Method

The present study employed qualitative approaches, applying inductive thematic analysis as suggested by Braun and Clarke (2022). The process involved the following steps: (1) familiarization with data, (2) initial coding, (3) theme review, (4) theme identification and labeling, and (5) reporting. The qualitative approach was employed to delve into people's experiences, perceptions, and practices of talent management in driving innovation in small and medium-sized enterprises (SMEs). This methodology enables the researcher to investigate phenomena within a setting that is challenging to adequately depict by quantitative methods (Mohammed et al., 2018; Vatosios & Haponen, 2021; Odugbesan et al., 2023; Alzuod, 2024).

Research samples were selected using a purposive sampling method to ensure participants possessed practical experience in organizational innovation and human resource management. SMEs were recruited through professional networks, professional connections, and internal referrals with the following criteria: (1) the company is located in Ho Chi Minh City, (2) it has been in operation for three years or above, and (3) it possesses activities related to human resource development and product or process innovation. In total, the study interviewed 15 HR managers and leaders across 10 companies, within four main sectors of technology, services, manufacturing, and education, to achieve diversity and opportunities to reflect the character of SMEs in major cities (Table

Table 1. Demographics of participants.

		(n)	(%)
Gender	Male	7	46.7%
	Female	8	53.3%
Specialized	Technology	5	33.3%
	Services	5	33.3%
	Manufacturing	3	20.0%
	Education	2	13.3%
Years of experience	≥ 3 years	9	60.0%
	≥ 5 years	6	40.0%

The data collected through semi-structured interviews, adapted from Škerlavaj et al. (2010), Mohammed et al. (2018), Alzoud & Dalain (2023). The questions in the interview were categorized into four themes of content: (1) managers' recognition of the contribution of talent management to innovation, (2) adopted talent management practices and policies, (3) drivers and barriers of innovation, and (4) suggestions

to improve the impact of talent management in stimulating innovation. Each interview lasted around 40–60 minutes, was conducted face-to-face or via the internet, and was recorded with participants' consent, and transcribed in their entirety for analysis and coding.

On research ethics, the participants were properly informed of the reason why, the content, and the right to withdraw from the study at any point in time without penalty. The participation was fully done on a voluntary basis and with informed consent. Anonymity and confidentiality in data were also assured, not revealing the identity of individuals or companies throughout the entire process of data collection, processing, and publication of results.

For further validation of the credibility of findings, two main strategies were used by the research team. Cross-comparison of data between different participants and across areas using data triangulation offered stability as well as completeness of the themes derived. Second, peer debriefing was achieved through disclosing the coding, analysis, and interpretation process to lecturers and external researchers, which helped review the validity, reduce personal bias, and increase the study's objectivity.

4 Results and Discussion

4.1 Results

This section presents the results of 15 semi-structured interviews with managers at SMEs in Ho Chi Minh City. The study focused on exploring the relationship between TM and innovation. Thematic analysis helps identify two main themes and four prominent sub-themes in the interview data.

4.1.1 Perceptions of Small and Medium Enterprises on the role of talent management in innovation

The role of TM in innovation. The majority of participants (86.7%) believed that TM plays a central role in stimulating creativity, transferring knowledge, and creating a foundation for technological and product innovation at SMEs in Ho Chi Minh City. One manager stated:

"Talents not only bring ideas but also have the ability to turn ideas into concrete products. Without them, any innovation plan would just remain on paper." (P6, HRM leader at SME in the field of technology)

12 out of 15 participants also emphasized that TM is not simply about recruitment but an overall strategy,

involving the identification, nurturing, and retention of people who have the ability to transform the organization.

"I don't think talent management is just the job of the HR department. For us, it is the foundation to promote creative thinking, transfer knowledge, and nurture truly innovative ideas." (P3, Manager at SME in the field of education)

TM factors that have the strongest impact on innovation. Of the four TM factors (attract, train, develop, and retain), retention and development are considered to have the greatest impact on innovation. As one respondent shared:

"Good R&D personnel need a stable environment and development opportunities. If they cannot be retained, the company loses its ability to compete creatively." (P2, HRM leader at SME in the field of education)

80.0% of participants mentioned the importance of innovation-oriented training, helping employees update technology trends, develop critical thinking, and creativity.

"Talented people cannot develop if they are not developed. We try to create conditions for them to learn continuously and feel recognized, because only then can they contribute creatively." (P1, HRM leader at SME in the field of services)

4.1.2 Talent management practices and strategies that promote innovation in Small and Medium Enterprises in Ho Chi Minh City

Specific examples of TM driving innovation. Interviews noted numerous specific cases where TM directly contributed to product and process innovation. For example:

"A young engineer proposed a new packaging method that saved costs and increased product shelf life. He was then placed in the key innovation team." (P7, HRM leader at SME in the field of services)

This suggests that when employees with creative potential are identified and empowered, they can create significant innovation value.

"Our organization has an 'Innovation Corner' program where anyone can submit ideas. This helps employees feel that their voice is valued." (P12, Manager at SME in the field of education)

TM strategy in the enterprise. The majority of companies (10 out of 15 investigated SMEs) ac-

counted for 66.7%, implementing TM integration strategies with the goal of innovation through: Linking innovation to the KPIs of key positions; Internal mentoring programs for young talent groups; Talent retention policies with opportunities to develop new products.

“We aligned KPIs for strategic locations, requiring not only sales but also at least one process improvement initiative per quarter. Mentors not only guide work but also discuss creative thinking. Thanks to that, young people confidently propose changes.” (P15, Manager at SME in the field of manufacturing)

However, some businesses (33.3%) still passively implement TM, without clearly linking it to innovation, including insufficient feedback channels, inefficient retention strategies, and challenges in assessing the impact of talent management on leading to a waste of internal potential innovation results. One person commented:

“Sometimes we only focus on recruiting good people, but there is no mechanism for them to promote their creativity. There are many ideas, but sometimes the company lacks a clear evaluation mechanism. Many suggestions are ignored or do not receive feedback, making people gradually reluctant to contribute.” (P9, HRM leader at SME in the field of technology)

4.2 Discussion

The present investigation primarily sought to investigate the influence of TM on innovation within SMEs in Ho Chi Minh city. The analytical results demonstrated that TM has a positive and considerable impact on innovation. The interview findings also showed that SME managers in Ho Chi Minh City do not consider TM as a simple human resources activity but rather a strategic aspect that is imperative for building the innovation potential of the organization. In other words, they believe that TM not only fills open positions but also serves as a platform for attaining creative thinking, knowledge transfer, and acquiring a competitive advantage through new processes or products. This is in line with the result of Mohammed et al. (2018), who discovered that TM serves as a mediator between organizational capabilities and innovation performance.

Furthermore, based on collected data, talent development and retention were identified as the two drivers with the most influential effect on innovation in SMEs. Managers opine that talent needs a secure setting, opportunities for growth, and timely appreciation to contribute to innovative activities effectively and sustain-

ably. Furthermore, this finding is consistent with the four-factor model of TM (attract, train, develop, retain) in the study of Mohammed et al. (2018). While previous quantitative studies often consider TM as an overall factor, this study clearly upholds the differentiation of the roles of each component in TM, with development and retention being the main pillars for innovation capability.

In addition, some participants also mentioned innovation-led training as one important supporting aspect. This is in accordance with the findings of Odugbesan et al. (2023) and Ibrahim & AlOmari (2020), who emphasized that process innovation is likely to be driven by frontline employees who need to be adequately trained in a manner that will enable them to identify and propose opportunities for improvement. Further, the research also shows that most of the firms have instituted some programs, such as idea suggestion schemes, in-house mentoring schemes, or development streams related to innovation goals. These actions demonstrate the practical role of TM in creating value through innovation.

However, there is a clear difference between organizations whose TM strategies are integrated into innovation and those that implement TM passively. The majority of participants acknowledged that while they were recruiting talented people, they lacked systems to harness their creativity – a common dilemma in organizations transitioning from traditional to innovation-oriented management models. This result extends the findings of Vatousios & Happonen (2021), who suggested that TM should be integrated into a comprehensive digital transformation and innovation strategy, rather than being implemented as discrete programs.

Although the role of TM is perceived positively, its implementation still faces a range of practical challenges such as: Lack of evaluation and feedback mechanisms for HR initiatives; Loss of talent due to ineffective retention policies; Lack of clear training for innovation; Lack of tools to measure the impact of TM on innovation outcomes. These are barriers consistent with the findings of Mohammed et al. (2018) that if TM is not strategically linked to innovation, organizations will find it difficult to transform individual capabilities into long-term competitive advantage.

5 Conclusion

This study is devoted to exploring how managers in SMEs in Ho Chi Minh City perceive and implement talent management (TM) as a driver of product and

process innovation. By means of qualitative investigation and thematic analysis according to Braun & Clarke (2022), two overarching themes and four sub-themes were generated, which significantly encapsulate the experiences, perceptions, and practices of TM management in this field. The results indicate that not only do managers acknowledge the strategic contribution of TM, but they are also implementing a range of practical actions to link TM to organizational capabilities for innovation. But this deployment is unequal across companies, and there are still difficulties in systematically installing TM into innovative strategies. Particularly, the study identifies that talent development and retention are two drivers demonstrating the greatest impact on innovation capacities. Real-world examples point out that with well-designed TM being adequately supported mechanisms, it can create enormous value for innovation, allowing organizations to react and develop rapidly in a competitive environment. However, in the case of some SMEs, barriers such as the lack of feedback systems, poorly established recognition systems, and inability to assess TM performance have prevented them from enjoying the maximum application of their human assets' power in innovation. This reveals that there is still an awareness-practice gap, and there is a need for more strategic actions by leaders.

To expand on the current results, future studies can conduct qualitative comparison studies across industries with different innovation characteristics, such as High-tech, Pharmaceutical & Medical, Manufacturing, Education & Training, Public Sector, services, etc. It is also recommended to apply mixed methods to quantitatively measure the relationship between TM factors and innovation indexes, combined with a qualitative viewpoint to fully support the results from different perspectives. Further research should also be carried out to meticulously explore the role of organizational culture and leadership in implementing TM towards innovation.

References

- Abdullah, H. H., & Abubakar, A. (2017). Strategic talent management and university performance: A theoretical perspective. *European Journal of Business and Management*, 9(4), 35–40. <https://core.ac.uk/download/pdf/234627719.pdf>
- Aithal, P. S. (2023). How to create business value through technological innovations using ICCT underlying technologies. *International Journal of Applied Engineering and Management Letters (IJAEML)*, 7(2), 232–292. <https://doi.org/10.5281/zenodo.8136520>
- Alsakarneh, A., Sakarneh, B., Bataineh, M. T., Fraihat, B. A. M., Nawasra, M., & Al-Smadi, A. W. (2023). The link between emotional labor and employee performance in the services sector. *Corporate Governance and Organizational Behavior Review*, 7(1), 101–110. <https://doi.org/10.22495/cgobrv7i1p10>
- Alzuod, M. A. (2024). The impact of talent management on innovation: The empirical study of pharmaceutical companies. *Corporate & Business Strategy Review*, 5(2), 72–79. <https://doi.org/10.22495/cbsrv5i2art6>
- Alzuod, M. A., & Dalain, F. N. (2023). The impact of entrepreneurial orientation on innovative performance in Jordanian SMEs during the COVID-19 pandemic. In A. Hamdan, H. M. Shoaib, B. Alareeni, & R. Hamdan (Eds.), *The implementation of smart technologies for business success and sustainability* (Studies in systems, decision and control: Vol. 216, pp. 159–169). Springer. https://doi.org/10.1007/978-3-031-10212-7_14
- Braun, V., & Clarke, V. (2022). In A. Maher (Ed.), *Thematic analysis: A practical guide*. SAGE
- Chen, G. K.-W., Tansley, C., & Chou, R. C.-C. (2021). Towards liminality competence: A migrant's talent identity narratives for re-imagining global talent management. *Journal of Organizational Effectiveness: People and Performance*, 8(4), 427–443. <https://doi.org/10.1108/JOEPP-02-2021-0037>
- Dadzie, Z., Agyapong, A., & Suglo, A. (2021). The role of internationalization in entrepreneurial orientation-performance link: Empirical study of SMEs in a developing nation perspective. *Review of International Business and Strategy*, 31(2), 257–280. Retrieved from: <https://www.emerald.com/insight/content/doi/10.1108/ribs-09-2019-0126/full/html>
- Ibrahim, R. I., & AlOmari, G. I. (2020). The effect of talent management on innovation: Evidence from Jordanian banks. *Management Science Letters*, 10, 1295–1306. <https://doi.org/10.5267/j.msl.2019.11.028>
- Jose, S., & Asha, P. (2019). Innovation in recruitment and talent acquisition: A study on technologies

- and strategies adopted for talent management in IT sector. *International Journal of Marketing and Human Resource Management*, 10(2), 1–8. https://iaeme.com/MasterAdmin/Journal_uploads/IJMHRM/VOLUME_10_ISSUE_2/IJMHRM_10_02_001.pdf
- Keskgn, H., Ğentürk, C., Sungur, O., & Kğrgg, H. M. (2010, June). The importance of SMEs in developing economies. In *2nd international symposium on sustainable development* (Vol. 183).
- Lukiastuti, F., & Kusuma, A. H. (2021, March). The moderating role of access to financing on the relationship between entrepreneurial orientation and performance of Batik Smes. In *The 3rd International Conference on Banking, Accounting, Management and Economics (ICOBAME 2020)* (pp. 123-128). Atlantis Press. Doi: [10.2991/aebmr.k.210311.024](https://doi.org/10.2991/aebmr.k.210311.024)
- Mahfouz, S., Halim, M. S. A., Bahkia, A. S., & Alias, N. (2022). Mediating role of employee commitment in the relationship between transactional leadership and employee performance. *Journal of Governance & Regulation*, 11(1), 337–350. <https://doi.org/10.22495/jgrv11i1siart13>
- Marin-Garcia, J. A., Aznar-Mas, L. E., & González-Ladrón-de-Guevara, F. (2011). Innovation types and talent management for innovation. *WPOM-Working Papers on Operations Management*, 2(2), 25–31. <https://doi.org/10.4995/wpom.v2i2.926>
- Mkhize, L. V. B., & Brijball Parumasur, S. (2022). Strategically aligning human resources skills in preparation for the Fourth Industrial Revolution. *Corporate Governance and Organizational Behavior Review*, 6(4), 233–245. <https://doi.org/10.22495/cgobrv6i4sip4>
- Mohammed, A. A., Hafeez-Baig, A., & Gururajan, R. (2018). Talent management as a core source of innovation and social development in higher education. In D. Parrish & J. Joyce-McCoach (Eds.), *Innovations in higher education — Cases on transforming and advancing practice* (pp. 1–31). IntechOpen. <https://doi.org/10.5772/intechopen.81377>
- Odugbesan, J. A., Aghazadeh, S., Al Qaralleh, R. E., & Sogeke, O. S. (2023). Green talent management and employees' innovative work behavior: The roles of artificial intelligence and transformational leadership. *Journal of Knowledge Management*, 27(3), 696–716. <https://doi.org/10.1108/JKM-08-2021-0601>
- Sivasankara Rao, S., Venkata Reddy, G., & Sireesha, K. (2025). Exploring talent management and its impact on organizational performance. *Journal of Emerging Technologies and Innovative Research (JETIR)*, 12(5). Retrieved from: https://www.researchgate.net/publication/392064303_Exploring_Talent_Management_and_Its_Impact_on_Organizational_Performance
- Škerlavaj, M., Song, J. H., & Lee, Y. (2010). Organizational learning culture, innovative culture and innovations in South Korean firms. *Expert Systems with Applications*, 37(9), 6390–6403. <https://doi.org/10.1016/j.eswa.2010.02.080>
- Sutrisno, S., Kuraesin, A. D., Siminto, S., Irawansyah, I., & Ausat, A. M. A. (2023). The role of information technology in driving innovation and entrepreneurial business growth. *Jurnal Minfo Polgan*, 12(1), 586-597. Doi: [10.33395/jmp.v12i1.12463](https://doi.org/10.33395/jmp.v12i1.12463)
- Thite, M., Rammal, H. G., & Ferreira, J. J. M. (2021). Talent management in the “new normal” — Case study of Indian IT services multinationals in China. *Thunderbird International Business Review*, 65(1), 131–141. <https://doi.org/10.1002/tie.22247>
- Tran, H. B. (2025). *A study on talent management at Peopleprofilers* [University graduation thesis, Ho Chi Minh Open University]
- Vatousios, A., & Happonen, A. (2021). Renewed talent management: More productive development teams with digitalization supported HR tools. *International Journal of Engineering & Technology*, 10(2), 170–180. <https://doi.org/10.14419/ijet.v10i2.31705>