Emerald Development and Learning in Organizations: An International Journal

Harnessing Generative AI for Self-Directed Learning: Perspectives from Top Management

Journal:	*Development and Learning in Organizations*
Manuscript ID	DLO-05-2024-0141.R1
Manuscript Type:	Original Paper
Keywords:	open innovation theory, AI-driven learning, employee-level learning, generative AI tools

Harnessing Generative AI for Self-Directed Learning: Perspectives from Top Management

Abstract

Purpose

The purpose of this paper is to explore the potential of generative AI-driven self-directed learning from the perspective of top management in the Sri Lankan software industry. By applying open innovation theory, the study aims to understand how business leaders perceive the integration of generative AI tools in organizational learning processes. The insights gained are intended to inform and encourage top management to promote generative AI-driven self-directed learning within their organizations.

Methodology

The research utilized a qualitative approach, conducting semi-structured interviews with eight senior managers from IT companies in Colombo, Sri Lanka. Data was synthesized and analyzed thematically to identify patterns and insights regarding generative AI-driven self-directed learning and its organizational impact.

Findings

The study reveals that top management in Sri Lanka's software industry perceives generative AI-driven self-directed learning positively. This perception is rooted in the alignment of such learning with open innovation principles, emphasizing knowledge sharing, collaboration, and the integration of external expertise to drive innovation. Generative AI tools empower employees to access diverse knowledge sources, fostering continuous learning and adaptability. Leaders recognize these tools' potential to enhance organizational innovation ecosystems and competitive

advantage. The findings suggest that active support from top management, customized training programs, and a culture that embraces continuous learning and innovation are crucial for successful implementation.

Originality

This paper uniquely explores generative AI-driven self-directed learning through the lens of top management in Sri Lanka's software industry, integrating open innovation theory to highlight its potential in enhancing organizational knowledge, collaboration, and competitive advantage.

Introduction

In recent years, artificial intelligence (AI) has revolutionized various organizational processes, including learning at all levels. Employees increasingly use generative AI tools for problem-solving within organizations through self-directed learning, leveraging these tools to generate personalized knowledge (Deloitte AI Institute, 2023).

To promote any new phenomenon, such as generative AI-driven self-directed learning within an organization, top management support is mandatory. Therefore, it is crucial to understand how business leaders perceive this new phenomenon for its successful integration into the organizational culture. Several studies have examined how business leaders view the use of generative AI tools in daily operations (Davis, 2024). Beauchene et al. (2023) found that while business leaders recognize the significance of integrating generative AI tools, most organizations are still playing catch-up in understanding their power and disruptive potential.

Despite the significance of generative AI-driven self-directed learning, few studies have investigated its potential from the perspective of top management. As a result, organizations have a limited understanding of its power and disruptive potential. This study uses open innovation

theory as the overarching framework to investigate the potential of generative AI-driven self-directed learning. The author anticipates that the findings will highlight the positive aspects of using generative AI tools for self-directed learning and build a stronger case for top management personnel worldwide to consider promoting generative AI-driven self-directed learning within their organizations.

Open innovation theory and self-directed learning

The shift towards self-directed learning through AI aligns with the principles of open innovation theory (OIT). OIT emphasizes the importance of leveraging external knowledge and resources to foster innovation within organizations (Chesbrough, 2006). By integrating insights from external sources, organizations can accelerate the innovation process and gain a competitive edge in the market (Chesbrough, 2006). Therefore, the adoption of generative AI tools for self-directed learning can be viewed as a strategy to facilitate open innovation within organizations, as it enables employees to access and incorporate external knowledge into their learning processes, ultimately driving innovation and competitive advantage.

Methodology

The researcher gathered data for this study through a qualitative approach. Eight senior managers from eight information technology companies in Colombo, Sri Lanka, who embraced the use of generative AI tools for self-directed learning, participated. Through semi-structured interviews, the researcher collected data on their perceptions of the potential of generative AI-driven self-directed learning. Table I outlines the steps performed during the data collection and analysis process.

Table I: Steps of the data collection and analysis process

Potential of generative AI-driven self-directed learning

Once the content interpretation stage was completed, it was quite evident that the potential of generative AI-driven self-directed learning, particularly from the perspective of top management, aligns well with several key findings of OIT. This aspect is further explained in the rest of this section.

Firstly, knowledge sharing, and collaboration are fundamental principles of open innovation, emphasizing the importance of leveraging external expertise and resources (Adamides & Karacapilidis, 2020). During the interviews, all the senior managers emphasized that generative AI tools facilitate self-directed learning by providing employees with access to a diverse range of knowledge sources, thereby enabling more effective collaboration with external partners. This approach accelerates the open innovation process by leveraging the collective intelligence of internal and external stakeholders.

Secondly, OIT emphasizes the importance of external knowledge sourcing to complement internal capabilities (Adamides & Karacapilidis, 2020). Most of the managers explained that generative AI tools empower employees to explore various sources of information and generate novel ideas independently. According to them, this capability enhances the organization's ability to source and integrate external knowledge, thereby enriching the innovation process and fostering a culture of continuous learning and improvement.

Moreover, co-creation is a central principle of open innovation, emphasizing collaborative value creation with external partners and customers (Adamides & Karacapilidis, 2020). All the managers commented that self-directed learning facilitated by generative AI tools enables employees to

develop innovative solutions collaboratively, leveraging their collective intelligence to drive co-innovation initiatives with external stakeholders. For example, they emphasized that their employees use generative AI tools to learn and effectively communicate with cloud service providers such as Amazon Web Services (AWS), Microsoft, and Google. This approach fosters a sense of ownership and engagement among stakeholders, leading to the creation of more relevant and impactful innovations.

Furthermore, agility and adaptability are crucial for organizations practicing open innovation to respond effectively to market changes and emerging opportunities (Adamides & Karacapilidis, 2020). Most of the managers believed that generative AI-driven self-directed learning empowers employees to continuously update their skills and knowledge, enabling them to adapt to changing market dynamics and drive innovation initiatives more effectively. For example, project teams are using generative AI tools to speed up their project planning processes. This agility enhances the organization's competitive advantage and resilience in dynamic environments.

Lastly, OIT emphasizes the importance of building and nurturing innovation ecosystems comprising diverse stakeholders (Bogers et al., 2018). All the managers agreed that by fostering self-directed learning through generative AI tools, organizations can cultivate a culture of innovation across their ecosystem. Engaging employees, partners, and customers in co-creating value and driving collective innovation efforts strengthens the organization's innovation ecosystem, fostering collaboration and knowledge exchange to fuel continuous innovation and growth. For example, every manager commented that the speed of problem-solving has increased since the development of the culture of self-directed learning through generative AI tools, which has contributed to better relationships with stakeholders.

In summary, the findings highlight that business leaders hold an overwhelmingly positive perception of the usage of generative AI tools for self-directed learning by their employees.

Implications for practice

Business leaders' positive acceptance of generative AI-driven self-directed learning has important implications for how organizations operate. They must actively support the seamless integration of these tools into organizational learning strategies, creating a culture that values innovation and continuous learning as essential for growth. Tailored training programs ensure employees are proficient in AI tools, enhancing critical thinking and problem-solving skills. Setting up learning communities promotes knowledge sharing and collaboration, benefiting from collective intelligence. Embracing experimentation and learning from failures fosters an environment where innovation thrives. Integrating self-directed learning into performance management systems aligns individual goals with organizational objectives, boosting employee engagement and motivation. Continuous evaluation of these initiatives ensures they remain relevant and effective, adapting to evolving organizational needs.

Conclusion

By implementing these strategies, organizations can harness the potential of generative AI-driven self-directed learning, enhancing capabilities, fostering innovation and collaboration, and facilitating ongoing improvement. This positions organizations for sustained growth and competitive advantage in today's dynamic business environment.

However, this study has several limitations. Firstly, adopting an interpretivist philosophy and qualitative approach means the results are not easily generalizable. Future research should explore different contexts for broader applicability. Secondly, the focus here was on the positive aspects

highlighted by top management; future studies could investigate potential drawbacks. Lastly, this study did not explore how integrating self-directed learning with generative AI tools interacts with other organizational factors like employee incentive schemes, which warrants further investigation.

References

Adamides, E., & Karacapilidis, N. (2020). Information technology for supporting the development and maintenance of open innovation capabilities. *Journal of Innovation & Knowledge*, *5*(1), 29-38. https://doi.org/10.1016/j.jik.2018.07.001

Beauchene, V., de Bellefonds, N., Duranton, S., & Mills, S. (2023). *AI at work: What people are saying*. Boston Consulting Group. https://www.bcg.com/publications/2023/what-people-are-saying-about-ai-at-work

Bogers, M., Chesbrough, H., & Moedas, C. (2018). Open innovation: Research, practices, and policies. *California Management Review*, *60*(2), 5-16. https://doi.org/10.1177/0008125617745086

Chesbrough, H. W. (2006). *Open innovation: The new imperative for creating and profiting from technology*. Harvard Business School Press. https://books.google.co.uk/books?id=OeLIH89YiMcC

Davis, J. P. (2024). *What business leaders really think about generative AI*. INSEAD. https://knowledge.insead.edu/leadership-organisations/what-business-leaders-really-think-about-generative-ai

Deloitte AI Institute. (2023). *Generative AI and the future of work: The potential? Boundless*. https://www2.deloitte.com/content/dam/Deloitte/us/Documents/consulting/us-ai-institute-generative-ai-and-the-future-of-work.pdf

Table I: Steps of the data collection and analysis process

Step Number	Step	Step Description
1	Participant interviews	The researcher obtained verbal consent from each respondent and conducted semi-structured interviews. After completing eight interviews (three face-to-face and five online), the researcher reached the point of saturation, where no new significant insights were emerging. Therefore, the researcher stopped at eight interviews.
2	Note taking and documentation	The researcher took detailed notes and documented responses during the interviews to capture important insights and observations from the participants.
3	Content synthesis	The researcher synthesized the collected data from interviews and notes to identify recurring themes and patterns related to the potential of generative AI-driven self-directed learning.
4	Thematic analysis	The researcher conducted thematic analysis manually, systematically identifying, analyzing, and interpreting patterns or themes within the data. This process helped uncover underlying meanings and understandings regarding the use of generative AI tools for self-directed learning among top management.
5	Category development	The researcher developed categories to organize and classify the identified themes or patterns. This step allowed for a structured approach to analyzing the data and drawing meaningful conclusions.
6	Content interpretation	The researcher interpreted the synthesized content within the context of OIT. This involved understanding how the themes and categories align with the principles of leveraging external knowledge and resources to drive innovation within organizations. The researcher utilized the findings presented by Adamides and Karacapilidis (2020) and Bogers et al. (2018) for content interpretation.