

INFORMATION ON DOCTORAL THESIS

1. Full name: Nguyen Trung Kien 2. Sex: Male
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5. Admission decision number: Decision No. 1467/QD-HVQLGD dated December 28, 2022, issued by the Director of the National Academy of Education Management.
6. Decision on Doctoral Thesis Title: Decision No. 1519/QD-HVQLGD dated December 30, 2022, issued by the Director of the National Academy of Education Management.
7. Changes in academic process: None.
8. Official thesis title: Management of STEM Education Activities for primary school students in Hung Yen Province under a participatory approach.
9. Major: *Education Management* 10. Training Code: **9 14 01 14**
11. Supervisors: *Dr. Nguyen Thi Thanh; Dr. Trinh Van Cuong*

12. Summary of the new findings of the thesis:

The thesis has developed and systematized the theoretical foundations of managing STEM education activities for students in primary schools under a participatory approach. It clarifies the participating stakeholders, the required competencies, and the role of each stakeholder within a “lead–coordinate” mechanism. On this basis, the thesis proposes a seven-step process for organizing STEM education activities and integrates the PDCA cycle to the management of STEM education activities under a participatory approach, thereby linking management functions with the responsibilities of relevant stakeholders. These findings contribute to refining the theoretical framework for STEM education management at the primary school level.

The thesis has systematically surveyed and assessed the current status of STEM education activities and the management of STEM education activities for students in primary schools in Hung Yen Province under a participatory approach. The research findings clarify strengths, limitations, and influencing factors; in particular, they identify shortcomings in the competencies of participating stakeholders, multi-stakeholder coordination mechanisms, the level of participation of students’ parents and social stakeholders, as well as the implementation of management stages in accordance with the PDCA cycle. These findings provide a direct empirical basis for proposing management solutions.

Based on the theoretical foundations and the findings from the current-status survey, the thesis proposes five systematic management solutions aligned with the participatory approach, including: developing and implementing a mechanism for managing STEM education activities; fostering management competencies for educational managers; strengthening coordination among schools, families, and the wider community; developing creative STEM education spaces; and organizing multi-stakeholder coordination in the evaluation of STEM education activities. The solutions have been evaluated in terms of feasibility and effectiveness, and one solution has been experimentally tested, thereby providing initial evidence of their practical applicability to primary education management in Hung Yen Province.

13. Practical applicability

The research findings of the thesis can be directly applied to the practical management of STEM education activities in primary schools in Hung Yen Province. The theoretical framework, the process for organizing STEM education activities under a participatory approach, and the “lead–coordinate” role-allocation mechanism can serve as a basis for educational managers to plan, organize, monitor, evaluate, and improve STEM education activities in a manner that mobilizes the participation of relevant stakeholders.

The proposed system of five management solutions is practical and feasible, including: establishing and implementing a management mechanism for STEM education activities; enhancing management competencies for school leaders; strengthening coordination among schools, families, and the community; directing the development of innovative STEM learning environments; and promoting multi-stakeholder collaboration in the evaluation of STEM education activities. The appraisal and pilot implementation results provide initial evidence that these solutions can bring about positive improvements in the management of STEM education activities.

Beyond Hung Yen Province, the research findings may be consulted, adapted, and applied in primary schools in localities with similar conditions. They may also serve as reference materials for the professional development of educational managers and teachers, as well as for further research on the management of STEM education under a participatory approach.

14. Further research directions

Based on the findings of the thesis, future studies may expand the scope of surveys and test the model for managing STEM education activities under a participatory approach across different localities and educational levels, thereby assessing the model’s appropriateness and the generalizability of the research findings.

Further in-depth research is also needed on multi-stakeholder coordination mechanisms and on the extent and effectiveness of the participation of families, enterprises, science and technology institutions, and communities in STEM education. At the same time, criteria and instruments should be developed to assess the level of participation and the quality of STEM education management.

Another significant research direction is the application of digital transformation, digital data, and artificial intelligence to the planning, organization, monitoring, evaluation, and improvement of STEM education activities. In addition, larger-scale and longer-term experimental studies should be conducted to assess the sustainable impacts of the proposed management solutions.

15. Thesis - related publications

- Nguyen Trung Kien (2022), Quan niệm về quản lý giáo dục STEM tại các trường Tiểu học theo tiếp cận tham gia. National academy of education management, Journal of Education Management, Vol.14, No. 8, August 2022, pp. 59-63. DOI: 10.53750/jem22.v14.n8.59

- Nguyen Trung Kien (2022), Vai trò của hiệu trưởng trong quản lý giáo dục STEM trường Tiểu học hiện nay. National academy of education management, Journal of Education Management, Vol. 14, No. 12A, December 2022, pp. 105-111. DOI: 10.53750/jem22.v14.n12A.105

- Nguyen Trung Kien (2023), Cơ sở lý luận về quản lý giáo dục STEM ở trường tiểu học theo tiếp cận tham gia. National academy of education management, Journal of Education Management, Vol. 15, No. 6, June 2023, pp. 59-62. DOI: 10.53750/jem23.v15.n6.59

- Nguyen Trung Kien (2025), Organizing STEM Education through a Participatory Approach in Vietnamese Primary Schools. National academy of education management, Journal of Education Management, Vol. 17, No. 11A, November 2025, pp. 177-192. DOI: 10.53750/jem.v17.n11A.177

- Nguyen Trung Kien (2025), The current situation of managing STEM education activities for primary school students in Hung Yen Province, Vietnam, under a participatory approach. Tennessee Community Service International of Empowerment, Vol. 2 No. 2, December 2025, pp. 49–61. <https://doi.org/10.53730/tcsie.v2n2.19>

Confirmed by the Supervisors

Hanoi, th , 2026
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