

# The Current Situation of Developing Creative Capacity in the Learning Process of Students at the Le Huu Trac University of Medicine and Pharmacy

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**Abstract:** Creative capacity is one of the core competencies that need to be developed in the training of doctors in order to meet the requirements of new tasks in the current context. Based on an empirical survey conducted at the Le Huu Trac University of Medicine and Pharmacy, this paper analyzes the current situation of creative capacity development in the learning process of medical students through indicators such as awareness, level of participation in learning and research activities, and the application of creativity knowledge in practice. The research results show that the majority of students have a proper awareness of the role of creative capacity and actively participate in learning and scientific research activities. However, the development of creative capacity remains uneven, and several contents as well as organizational forms have not yet been implemented regularly or effectively. Therefore, this study provides a scientific basis for further innovation in competency-based training at the Le Huu Trac University of Medicine and Pharmacy.

**Keywords:** Creative Capacity; Medical Students; Le Huu Trac University of Medicine and Pharmacy.

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## I. INTRODUCTION

In the context of fundamental and comprehensive educational reform, the development of learners' competencies has been identified as the central objective of higher education. In the field of medicine, this requirement becomes even more urgent due to the specific nature of medical examination and treatment, all of which involve complex situations that demand doctors not only possess solid professional expertise but also demonstrate independent thinking, creative capacity, and adaptive flexibility.

Creative capacity enables medical students to proactively identify and solve problems, propose innovative solutions, and flexibly apply knowledge and skills to learning and professional practice. Recognizing its importance, the Le

Huu Trac University of Medicine and Pharmacy has implemented various policies and measures aimed at fostering creative capacity among students. However, practical implementation indicates that the effectiveness of these measures remains uneven, highlighting the need for objective research-based evaluations to serve as a foundation for adjustment and improvement.

Based on this rationale, the present paper focuses on examining the current situation of creative capacity development in the learning process of medical students at the Le Huu Trac University of Medicine and Pharmacy, thereby contributing to the improvement of training quality for doctors in response to the demands of current and future missions.

## II. SUBJECTS AND METHODS

### A. Research Subjects

The research subject of this study is the current situation of creative capacity development in the learning process of medical students at the Le Huu Trac University of Medicine and Pharmacy.

### B. Research Methods

This study employs several primary research methods, including questionnaire-based surveys, analysis and synthesis, and comparative methods, in order to collect, process, and evaluate data in an objective and scientific manner.

## III. RESULTS AND DISCUSSION

### A. The Current Situation of Creative Capacity Development in the Learning Process of Medical Students at the Le Huu Trac University of Medicine and Pharmacy

#### ➤ Awareness and Responsibility of Lecturers, Administrators, and Students

The survey results indicate that the awareness and responsibility of stakeholders involved in training play a foundational role in the development of creative capacity among medical students. A survey conducted with 30 lecturers and administrators at the Le Huu Trac University of Medicine and Pharmacy revealed a high level of consensus regarding the importance of creative capacity for the quality of doctor training.

Table 1. Awareness and Responsibility of Lecturers in Developing Creative Capacity

Criteria	Very important (%)	Important (%)	Moderate (%)	Not important (%)
Role of creative capacity	60,0	30,0	10,0	0
Responsibility for guiding students	66,7	23,3	10,0	0
Organization of creative activities	50,0	33,3	16,7	0
Coordination among faculties and departments	46,7	36,7	16,6	0
Assessment and feedback on creative ideas	53,3	33,3	13,4	0

The data presented in Table 1 indicate that more than 90% of lecturers and administrators rated both the role of creative capacity and the responsibility for developing students' creative capacity as "very important" or "important." This result reflects a high level of consensus in awareness among teaching staff and training administrators at the Le Huu Trac University of Medicine and Pharmacy, and at the same time demonstrates that creative capacity has been identified as a core requirement in the training of doctors. Notably, the proportion of respondents rating the responsibility for guiding students in developing creative capacity as "very important" was the highest (66.7%), indicating that the majority of lecturers clearly recognize their proactive role in orienting, supporting, and fostering students' creative potential.

However, Table 1 also reveals that a proportion of lecturers rated several criteria at a "moderate" level, particularly those related to the organization of creative activities, coordination among faculties and departments, and the assessment and feedback of students' creative ideas. This proportion ranges from approximately 13% to nearly 17%. Although not large, this figure is noteworthy in the context of the current demand for educational reform toward competency-based training. This finding suggests that the implementation of activities aimed at developing creative capacity remains uneven and is highly dependent on individual lecturers' awareness and initiative as well as on the practices of specific training units.

Thus, it can be concluded that general awareness of the role of creative capacity in the learning process of medical students is relatively comprehensive and consistent. Nevertheless, there are still certain gaps in translating this awareness into concrete pedagogical practices, coordination mechanisms, and systematic evaluation processes. These limitations partly account for differences in the level of participation and the effectiveness of creative capacity development among students, and they highlight the need to further improve management and training organization measures in the coming period.

#### • Proposed Solution:

It is necessary to continue raising lecturers' and administrators' awareness through professional development programs on competency-based teaching methods, while linking responsibility for creative capacity development with teaching quality assessment and performance-based evaluation and reward systems.

#### ➤ The Current Situation of Content in Developing Creative Capacity in Learning

The content of creative capacity development for medical students focuses on their ability to mobilize knowledge, identify problems, propose solutions, and produce learning and research outputs with practical value.

Table 2. Evaluation of the Appropriateness of Content for Creative Capacity Development

Content	Very appropriate (%)	Appropriate (%)	Moderate (%)	Not appropriate (%)
Mobilizing knowledge and scientific thinking	56,7	30,0	13,3	0
Identifying problems and proposing solutions	52,0	33,3	14,7	0
Producing learning and research outputs	53,3	32,0	14,7	0

The results presented in Table 2 indicate that the content of creative capacity development in the learning process of medical students is evaluated at a high level of appropriateness. Specifically, more than 85% of students selected the levels “very appropriate” and “appropriate” for all three content groups, including mobilizing knowledge and scientific thinking; identifying problems and proposing solutions; and producing learning and research outputs. This finding confirms that the content related to creative capacity development currently implemented at the Le Huu Trac University of Medicine and Pharmacy basically meets students’ learning and research needs as well as their professional orientation in the context of medical training.

Among these content areas, the component related to mobilizing integrated knowledge and scientific thinking received the highest proportion of “very appropriate” ratings (56.7%). This result reflects the specific characteristics of medical training, in which students are frequently required to simultaneously apply basic medical knowledge, clinical medicine to address complex situations. Students’ high evaluation of this content suggests that the training program has created certain conditions for learners to develop integrative thinking and the ability to connect knowledge—an essential component of creative capacity.

Regarding the content of problem identification and the proposal of new solutions, the proportions of students rating it as “very appropriate” and “appropriate” also accounted for more than 85%. However, nearly 15% of respondents considered this content to be only “moderately appropriate.” This finding indicates that although students clearly recognize the importance of problem identification and creative solution development in learning, opportunities to practice these skills in some courses remain limited. In practice, problem identification and problem-solving require students to be placed in open, practice-oriented situations, whereas several courses still tend to emphasize linear knowledge transmission.

Similarly, with respect to the content related to producing learning and research outputs, the majority of students provided positive evaluations; nevertheless, a certain proportion of respondents perceived the level of appropriateness as not sufficiently high. This may stem from the fact that students’ creative outputs are not consistently required or utilized across all courses, but are mainly concentrated in student scientific research activities or in a limited number of practice-oriented courses. Thus, although the content of creative capacity development has been clearly identified within the training program, the level of implementation and depth of impact across courses remain uneven.

Based on these findings, it can be concluded that the content of creative capacity development in the learning process of medical students at the Le Huu Trac University of Medicine and Pharmacy is appropriate and properly oriented. However, further adjustments are needed to enhance situational relevance, practical applicability, and interdisciplinary integration. Clarifying learning outcomes related to creative outputs in each course would contribute to improving the effectiveness of creative capacity development and ensuring greater alignment among training objectives, content, and teaching methods.

- *Proposed Solution:*

Strengthen the integration of creative content into individual courses by linking it to professional practice situations; design open-ended learning tasks, project-based learning activities, and clinical case simulations.

➤ *Forms and Measures for Developing Creative Capacity*

The Le Huu Trac University of Medicine and Pharmacy has implemented a variety of forms and measures to promote the development of creative capacity among students.

Table 3. Evaluation of the Effectiveness of Forms for Developing Creative Capacity

Forms	Very effective (%)	Effective (%)	Moderate (%)	Not effective (%)
Active learning-oriented teaching	46,7	40,0	13,3	0
Student scientific research	43,3	36,7	20,0	0
Medical practice and drills	53,3	33,3	13,4	0

The results presented in Table 3 clearly reflect the effectiveness of the forms for developing creative capacity currently implemented at the Le Huu Trac University of Medicine and Pharmacy. Overall, all learning forms received positive evaluations from students, with the majority selecting the levels “very effective” and “effective.” This

indicates that the initial orientation toward innovating teaching organization in the direction of learner-centered and competency-based approaches has generated positive impacts.

Among these forms, practical training, simulations, and medical drills were rated the highest, with 53.3% of students considering them “very effective” and 33.3% rating them as “effective.” This result accurately reflects the specific characteristics of medical training, in which students’ creative capacity is most strongly stimulated and clearly manifested when learners are placed in real-life or simulated practical situations that require rapid, flexible, and accurate decision-making. Through practice and drills, students not only apply acquired knowledge but also actively search for optimal solutions, thereby fostering creative thinking closely aligned with professional requirements.

With regard to learner-centered and active teaching approaches, more than 86% of students rated these forms as “very effective” or “effective,” indicating that innovations in teaching methods toward student-centered learning have contributed to increasing students’ active engagement in the learning process. Activities such as group discussions, problem-solving tasks, and case-based learning provide opportunities for students to exchange ideas, engage in critical reflection, and present their viewpoints, thereby enhancing independent and creative thinking. However, a proportion of students still rated this form as “moderately effective,” suggesting that the effectiveness of active teaching methods depends considerably on individual lecturers’

instructional capacity and their level of pedagogical innovation.

Student scientific research activities were also evaluated relatively positively; however, the proportion of students rating this form as “moderately effective” (20.0%) was higher than that for other forms. This finding indicates that although scientific research offers a favorable environment for creative capacity development, not all students have equal opportunities or sufficient capacity to participate regularly and effectively. Possible reasons include the high methodological demands of research activities, academic workload pressures, and differences in research competence and interest among students.

In summary, Table 3 demonstrates that the forms for developing creative capacity at the Le Huu Trac University of Medicine and Pharmacy are diverse and have achieved certain levels of effectiveness, particularly those closely associated with practical experience. Nevertheless, disparities in effectiveness across different forms remain, highlighting the need to further improve organizational approaches, expand participation opportunities, and strengthen support mechanisms in order to maximize the role of each form in fostering students’ creative capacity.

Table 4. Evaluation of Measures for Developing Creative Capacity

Measures	Very Effective (%)	Effective (%)	Moderate (%)	Not Effective (%)
Innovation in learning methods	58,7	28,0	13,3	0
Student scientific research	60,0	30,0	10,0	0
Medical practice and internships	56,7	26,7	16,6	0
Guided self-study	50,0	33,3	16,7	0

The results presented in Table 4 indicate that the measures for developing creative capacity in the learning process of medical students at the Le Huu Trac University of Medicine and Pharmacy were all evaluated positively. The proportions of students selecting the levels “very effective” and “effective” predominated across all measures, and no respondents considered these measures to be “ineffective.” This finding reflects both the appropriateness of the overall orientation and the feasibility of the system of measures currently implemented by the Le Huu Trac University of Medicine and Pharmacy in the training process.

Among the surveyed measures, student scientific research was rated as the most effective, with 60.0% of respondents considering it “very effective” and 30.0% rating it as “effective.” This result demonstrates that student scientific research is not merely a supplementary academic activity, but rather a crucial environment for the formation and development of creative capacity. Through processes such as identifying research problems, formulating hypotheses, selecting methodologies, and analyzing results, students are trained in independent thinking, critical thinking, and the ability to propose innovative solutions—core competencies required of doctors in professional practice.

The measure of innovating learning methods also received highly positive evaluations, with 58.7% of students rating it as “very effective” and 28.0% as “effective.” This indicates that the application of active, learner-centered teaching methods has facilitated students’ proactive participation in the learning process, encouraging them to confidently express viewpoints, exchange ideas, and address problems through novel approaches. Nevertheless, 13.3% of students rated this measure as “moderately effective,” suggesting that the effectiveness of pedagogical innovation still depends substantially on lecturers’ instructional capacity, flexibility, and level of commitment to teaching reform.

Regarding medical practice and internships, although the majority of students evaluated this measure as “very effective” or “effective,” the proportion of “moderately effective” responses remained at 16.6%. This result indicates that practice-based training provides a favorable environment for developing creative capacity, particularly in addressing complex medical situations. However, when practical content primarily focuses on procedural skill training based on predefined protocols, with limited opportunities for students to propose alternative solutions or engage with open-ended scenarios, the potential for fostering creative capacity may be constrained.

Guided self-study was also evaluated relatively positively; however, its effectiveness was not entirely consistent across students. The proportion of respondents rating this measure as “moderately effective” remained relatively high (16.7%), suggesting that self-directed learning has not fully realized its potential in promoting creative capacity development. Possible explanations include a lack of clear guidance regarding creative self-study content and methods, insufficient and timely feedback from lecturers, and the absence of explicit evaluation mechanisms for students’ self-learning outcomes.

In summary, the findings from Table 4 confirm that the measures for developing creative capacity among medical students at the Le Huu Trac University of Medicine and Pharmacy are appropriate and effective. Nonetheless, the degree of impact varies across measures, underscoring the

need to further refine organizational and implementation approaches in a more systematic manner, strengthen lecturers’ guidance roles, and expand opportunities for students to participate, experience, and fully develop their creative potential.

- *Proposed Solution:*

Prioritize the expansion of experiential learning activities and student scientific research, while enhancing lecturers’ roles in guidance, feedback, and academic support.

➤ *Achieved Outcomes and Existing Limitations*

The survey results from 150 students reflect their level of active participation in activities aimed at developing creative capacity.

Table 5. Level of Student Participation in Creative Capacity Development Activities

Activities	Very frequently (%)	Frequently (%)	Infrequently (%)
Academic seminars and forums	46,7	40,0	13,3
Creative contests and innovation competitions	43,3	36,7	20,0
Simulation-based practice	53,3	33,3	13,4
Group activities and discussions	50,0	36,7	13,3
Application of creativity in practice	48,0	40,0	12,0

The results presented in Table 5 clearly reflect the level of participation of medical students in activities aimed at developing creative capacity during their learning process at the Le Huu Trac University of Medicine and Pharmacy. Overall, the proportions of students participating at the levels of “very frequently” and “frequently” accounted for the majority, indicating that the Academy’s training environment has created favorable conditions to encourage students to be proactive, engaged, and creative in learning.

Among the surveyed activities, simulation-based practice demonstrated the highest level of participation, with 53.3% of students reporting participation at the “very frequent” level and 33.3% at the “frequent” level. This result highlights the particularly important role of simulation activities in medical education. Through simulated scenarios, students are placed in contexts that closely resemble professional practice, requiring them to mobilize integrated knowledge, professional skills, and flexible thinking to manage situations effectively. These conditions provide a natural and practical foundation for the formation and development of creative capacity aligned with real-world demands.

Group discussions and teamwork activities also recorded high participation rates, with 50.0% of students participating “very frequently” and 36.7% participating “frequently.” This finding indicates that collaborative learning approaches have been implemented relatively effectively, creating opportunities for students to exchange perspectives, share ideas, and develop critical thinking skills. Through academic interaction and discussion, students not only acquire knowledge from lecturers but also learn from

one another, thereby forming more innovative and creative approaches to problem-solving.

For academic seminars and forums, the proportions of students participating at the “very frequent” and “frequent” levels exceeded 86%, reflecting the growing interest and demand for academic exchange among medical students. These activities not only help students update new knowledge and broaden their scientific perspectives but also provide opportunities to present, defend, and refine creative ideas within a rigorous academic environment.

Creative contests and innovation competitions showed lower participation levels compared with other activities, with 20.0% of students indicating that they participated “infrequently.” This suggests that although creative competitions play an important role in identifying and nurturing innovative ideas, students’ opportunities to participate remain limited. Possible reasons include high demands in terms of time and effort, as well as the lack of frequent, continuous, and context-appropriate innovation platforms tailored to the specific characteristics of medical training.

Regarding the application of creative ideas in practice and real-life contexts, the majority of students reported frequent or very frequent participation, indicating that students’ creative capacity has begun to extend beyond idea generation toward practical application in learning and professional skill development. However, a proportion of students still participated less frequently, reflecting differences in initiative, confidence, and the ability to apply creative thinking among individuals.

In summary, Table 5 demonstrates that medical students at the Le Huu Trac University of Medicine and Pharmacy have shown relatively active participation in creative capacity development activities. Nevertheless, variations in participation levels across different activities and among students indicate the need to further diversify organizational forms, expand participation opportunities, and establish appropriate incentive and support mechanisms to ensure that all students are provided with conditions to comprehensively develop their creative capacity.

- *Proposed Solution:*

Improve creative capacity assessment mechanisms linked to medical practice, while strengthening personalized support and fostering a learning environment that encourages experimentation and continuous improvement.

#### *B. Discussion of Research Findings*

Based on the research findings on the current situation of creative capacity development in the learning process of medical students at the Le Huu Trac University of Medicine and Pharmacy, several key aspects can be discussed in order to clarify the scientific and practical significance of the results.

First, the findings indicate that lecturers, administrators, and students generally demonstrate a high level of awareness regarding the role of creative capacity in learning. This serves as an important prerequisite for the implementation of policies and measures aimed at fostering creative capacity in training practice. In the context of medical education, creative capacity is not only associated with learning and research abilities but is also directly related to the ability to manage complex medical situations under the specific conditions of operations, such as field deployment, exercises, and emergency casualty care. Therefore, the fact that the majority of lecturers and administrators highly value creative capacity reflects a strong alignment between stakeholders' awareness and the practical requirements of education and training missions at the Le Huu Trac University of Medicine and Pharmacy.

However, the results also reveal that levels of awareness and responsibility among lecturers are not entirely uniform. A small proportion of lecturers rated the organization of creative activities and inter-unit coordination at a moderate level. This suggests that although the overall orientation is clearly defined, the concretization of responsibility for creative capacity development within individual courses and training activities has not yet been implemented consistently. This issue warrants attention in the context of fundamental and comprehensive educational reform toward competency-based education.

Second, with regard to the content of creative capacity development, the survey results show that current content is generally appropriate to training objectives and the specific characteristics of medical education. Emphasizing the development of integrated knowledge mobilization, problem identification, and the proposal of innovative solutions represents a sound orientation that aligns with the

requirements for fostering scientific thinking and professional practice competence among students. Compared with findings from other studies in higher education and medical training, these results suggest that the Le Huu Trac University of Medicine and Pharmacy has adopted a relatively early and appropriate approach in integrating creative capacity development into its training content.

Nevertheless, feedback from students indicates that in some courses, creative capacity development content remains rather general and is not yet closely linked to specific medical scenarios. As a result, students' creative capacity tends to be developed primarily at the level of awareness and idea generation, while the ability to apply creativity to solve practical problems remains limited. This finding highlights the need for further adjustment of training content toward greater situational relevance, interdisciplinary integration, and practical applicability, particularly in specialized and practice-oriented courses.

Third, the findings related to forms and measures for creative capacity development show that experiential forms—such as practice-based learning, simulations, medical drills, and student scientific research—are rated more highly than traditional learning forms. This is consistent with the psychological and professional characteristics of medical students, who benefit from learning environments that present challenges, require independent thinking, and demand rapid decision-making. Students' high evaluation of student scientific research also underscores its importance as a key channel for developing creative capacity, critical thinking, and scientific working methods.

Nevertheless, the study also indicates that the implementation of forms and measures for creative capacity development remains uneven across training units and student groups. Some students remain relatively passive and lack confidence in proposing new ideas or participating in scientific research. Possible reasons include the heavy academic workload focused on specialized knowledge, limited available time, and the absence of sufficiently strong incentive and support mechanisms for creative activities.

Fourth, in terms of outcomes, the majority of students demonstrate awareness and relatively active participation in creative capacity development activities. This is a positive signal, indicating that the training environment at the Le Huu Trac University of Medicine and Pharmacy has increasingly created favorable conditions for students to develop initiative and creativity in learning. However, differences in the level and effectiveness of creative capacity development among students suggest the need for more personalized solutions that align with the characteristics, capacities, and developmental orientations of different student groups.

In summary, the development of creative capacity in the learning process of medical students at the Le Huu Trac University of Medicine and Pharmacy has achieved important initial results, while certain limitations remain that require further attention and improvement. Closely linking the analysis of the current situation with specific solutions not

only contributes to enhancing training quality but also meets the demand for developing a corps of doctors with independent thinking, creative capacity, and strong adaptability to new mission requirements. These discussion outcomes also provide a scientific basis for proposing future orientations and solutions for creative capacity development in the next stage.

#### IV. CONCLUSION

The study indicates that the development of open-minded thinking is an essential requirement in contemporary medical education. The survey findings conducted at medical universities in Hanoi reveal that, although there have been positive changes in both awareness and implementation, certain limitations still remain and need to be addressed. To enhance the effectiveness of fostering open-minded thinking among medical students, training institutions should continue to innovate training objectives, content, teaching methods, and organizational forms, while simultaneously strengthening students' proactive roles in the learning process.

The findings of this study may serve as a reference for medical universities in designing and implementing competency-based training programs that respond to the current demands of education and healthcare practice.

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