

Multi-strategy Teaching and Learning in Drug Delivery

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Introduction

- Rapid scientific evolution requires adaptable teaching methods that promote deep learning and student autonomy.
- Multi-strategy Teaching and Learning in Drug Delivery (**MsTL-DD**) combines solid current scientific content with active student-centered methods to promote engagement, critical thinking, and problem-solving skills.
- Aligned with contemporary trends of maximum learning with minimum teaching [1], the practice shifts the focus from passive instruction to active participation, ensuring development of essential academic and professional skills.



Aim

- Report the MsTL-DD practice and evaluate its effectiveness in improving knowledge retention, skill acquisition, and student engagement.
- Compare students' satisfaction with MsTL-DD practice to lecture-based courses.

Methods

MsTL-DD Approach

Pre-Class Engagement

Students engage with research materials and self-study, supported by curated content

Post-Class Reflection

Students reflect on learning and assess peers

Class Activities

Interactive activities ensure active participation

Oral presentations
Students deliver presentations and engage in discussions.

Role-plays
Students act out scenarios to communicate & understand concepts

Problem-solving

Students work together to solve given tasks

Assessment Methods

- Written Reports
- Oral/Poster Presentations
- Structured Peer Reviews
- OSCP Exam

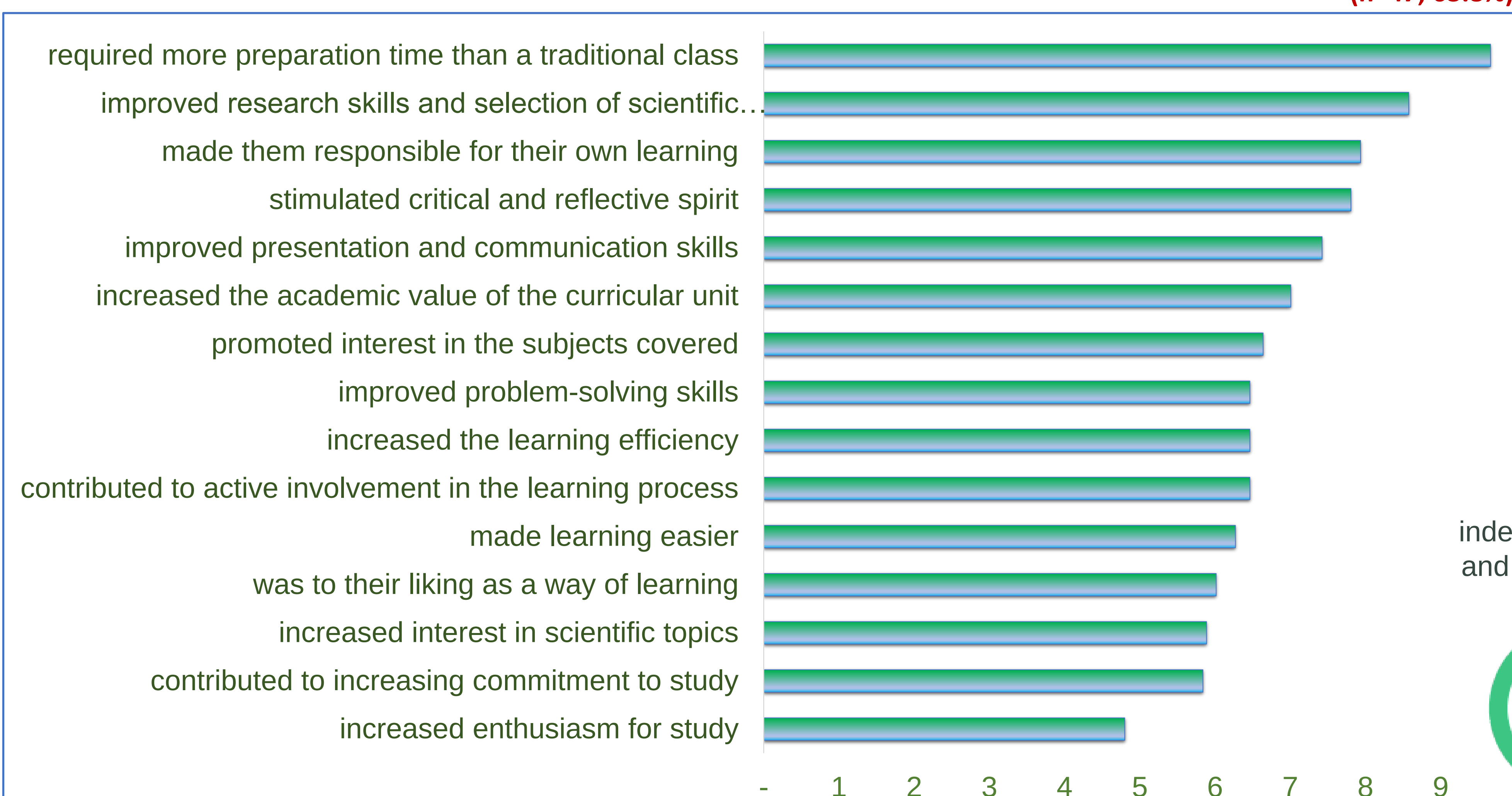
Interactive in-class activities

Students' satisfaction compared to traditional lecture-based courses

- Online Survey (1-10 continuous scale)
- Performance Analysis
- Qualitative Evaluation

Results

Students recognized that MsTL-DD:



Critical Thinking
Developing analytical & evaluative skills

Collaborative Problem-Solving
Fostering teamwork & collective problem-solving

Autonomy
Encouraging independent learning and decision-making

Communication skills
Learn and train interpersonal skills

Conclusion

- By fostering autonomy, critical thinking and collaborative problem-solving, MsTL-DD prepares students for dynamic professional environments and drives continuous pedagogical innovation to meet evolving educational needs.
- Broad applicability across academic disciplines adds value to the practice.