

MAPPING THE JOURNEY: A STUDY OF CONSTRUCTIVE ALIGNMENT FOR ASSESSMENT STRATEGIES IN PRE-CLINICAL MEDICAL EDUCATION

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Introduction

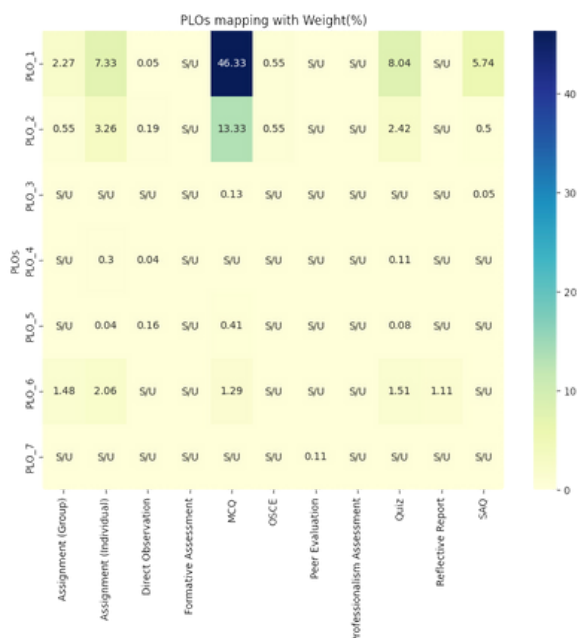
To develop competent future physicians, a well-constructed medical school curriculum is crucial. The decision-making process in curriculum design requires a systematic ‘constructive alignment’ approach, synchronizing learning outcomes, activities, and assessments. Curriculum mapping is a pivotal tool, providing a visual and analytical representation to identify gaps and misalignments. This study aims to evaluate the pre-clinical curriculum, exploring the implementation of constructive alignment and pinpointing opportunities for targeted reform.

Method

A curriculum mapping approach employed the interplay between assessment methods and program learning outcomes (PLOs) in a medical school’s pre-clinical curriculum. Using Microsoft Excel and RawGraphs for analysis and visualization, 35 courses were reviewed, emphasizing seven PLOs: ‘Medical Sciences (PLO1)’, ‘Patient Care (PLO2)’, ‘Health Systems Sciences (PLO3)’, ‘Professionalism (PLO4)’, ‘Communication Skills (PLO5)’, ‘Research Skills (PLO6)’, and ‘Self-development, Teamwork, and Leadership (PLO7)’. The resulting curriculum map were both diagnostic and visual aid, exposing gaps and insufficient assessments, revealing discrepancies between intended outcomes and assessments.

Result

The heatmap graph visually represents the distribution of assessment methods across various Program Learning Outcomes (PLOs) in percentage terms. The color gradient, ranging from light to dark shades of blue, indicates varying levels of weight percentages, while cells marked with "S/U" denote assessment methods that are graded solely on a pass/fail basis. Curriculum mapping highlighted ‘Medical Sciences (PLO1)’ as the most heavily weighted PLO, while ‘Health Systems Sciences (PLO3)’, ‘Professionalism (PLO4)’, and ‘Self-development, Teamwork, and Leadership (PLO7)’ were underrepresented in the grading system. Assessments predominantly aligned with the types of outcomes, with ‘Professionalism Appraisal’ and ‘Formative Assessments’ contributing zero to grading, relying on class participation and assignment completion for evaluation which predominantly graded on a pass/fail basis (S/U). Multiple-choice tests dominated assessment methods, comprising 61.50% of the total, followed by individual assignments and quizzes at 12.98 and 12.16%, respectively. Soft skills assessments accounted for 30% of evaluations, underlining their importance in the curriculum, though quantification of these skills remained a challenge. Additional methods like direct observation and peer evaluation were considered, indicating a need for more comprehensive assessment approaches.



Discussion and Conclusion

Our study underscores the need for a strategic rebalancing of assessment distribution. While ‘Medical Sciences’ currently receive a substantial focus, there is a distinct need to give more attention to ‘Health Systems’, ‘Professionalism’, and ‘Self-development, Teamwork, and Leadership’ outcomes. Insights from evaluating alignment and discrepancies guide targeted curriculum improvements. However, a limitation is the exclusion of clinical years, critical for a holistic curriculum view.



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