

How Do Pre-clinical Medical Students Define Self-Directed Learning?



College of
Medicine

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Introduction

- The Liaison Committee on Medical Education (LCME) requires allotment of unscheduled time for self-directed learning to facilitate the development of lifelong learning skills.
- The LCME's definition of self-directed learning includes an educational needs self-assessment, individual mastery of information, resource credibility assessment, and subsequent feedback.²

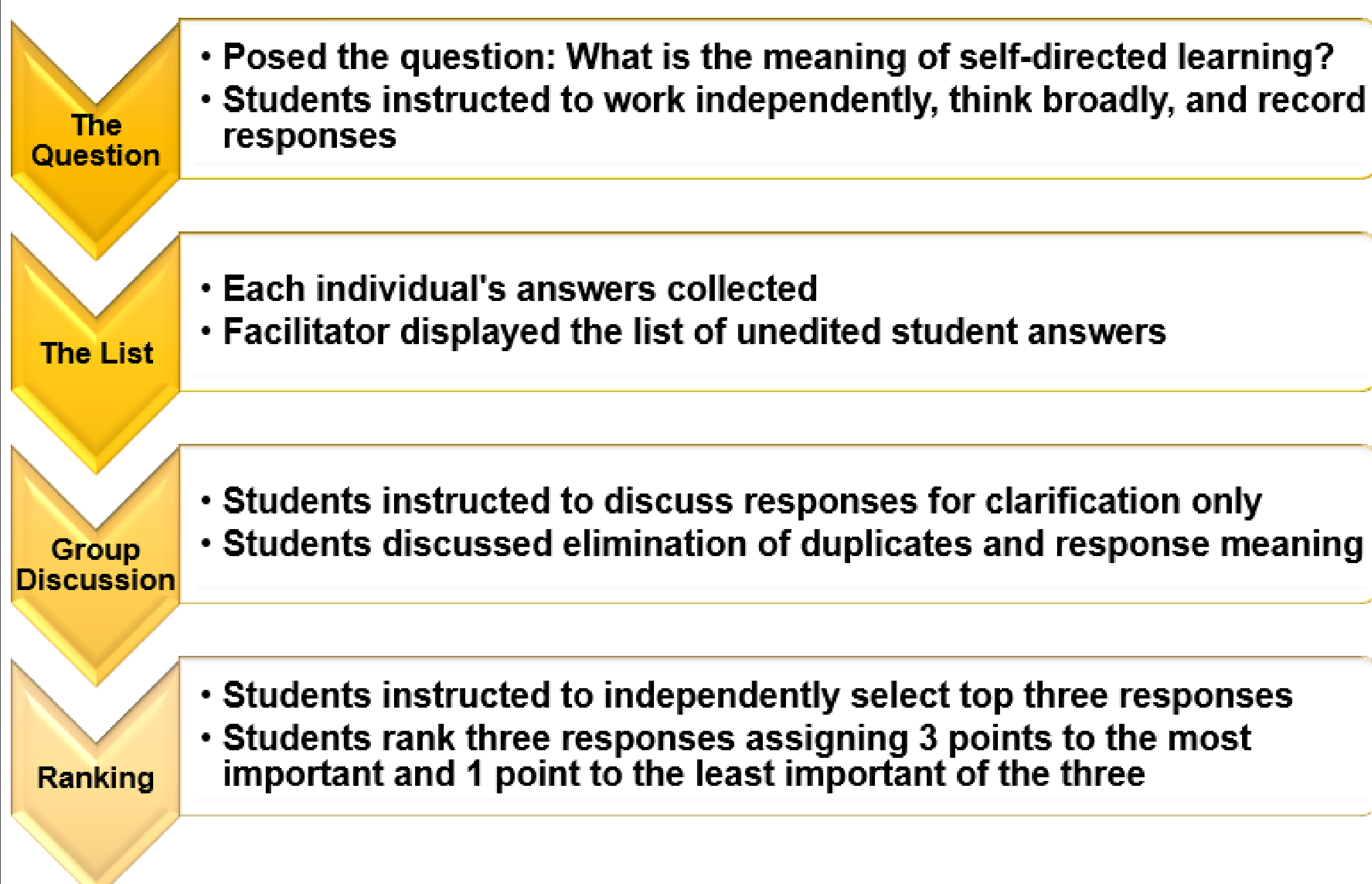
Objective

- To determine the medical student perspective and understanding of self-directed learning during the pre-clinical curriculum.

Methods

- Assessed second-year (n = 10), first-year (n = 10), and newly matriculated (n = 7) medical students' understanding by asking them to identify the meaning of self-directed learning.
- Facilitated two focus groups per pre-clinical year using nominal group technique.¹

Nominal Group Technique



- Qualitative answers with their numerical scores were then compared within and between each class.
- Self-regulated learning theory was used as a model incorporating overarching themes of planning, learning, assessment, and adjustment.³

Results

Self-Directed Learning Definition Ranking – A Comparison Across Pre-clinical Years						
Rank	Second-year (MS2)		First-year (MS1)		Newly Matriculated (New)	
1	Self-knowledge to identify how I learn best	Learning led and decided by students based on what works best for the student	Student knows what they want to achieve and are independent to get there as they choose	Working from expected curriculum goals but you are putting forward your own effort, at your own pace	Internal motivation without outside pressure to learn necessary information	I set the pace of learning: Volume intake and Time management
2	Student selects method for achieving a provided learning objective	The learner works independently at his/her unique pace	Student knows the goal, resources, and limits are of the task	You set your own pace and plan	Creating your own study plan with specific goals, objectives, and timelines	Understanding how you learn and picking strategies that match your learning styles
3	Building a personalized mental model of academic content for future experiences	Learning using one's own methods without being limited to a single source (i.e. PowerPoint, lecture, etc.) This may involve a combination of video series, textbook reading, flashcards, etc. Identifies study resources to reach a goal (materials or resources)	Involves work that should be presented by faculty, but mastery occurs through the student using materials Goals being made clear and given a standardized list of resources	Not attending mandatories and reviewing recorded lectures on my own	Personal accountability Active learning	Work independently

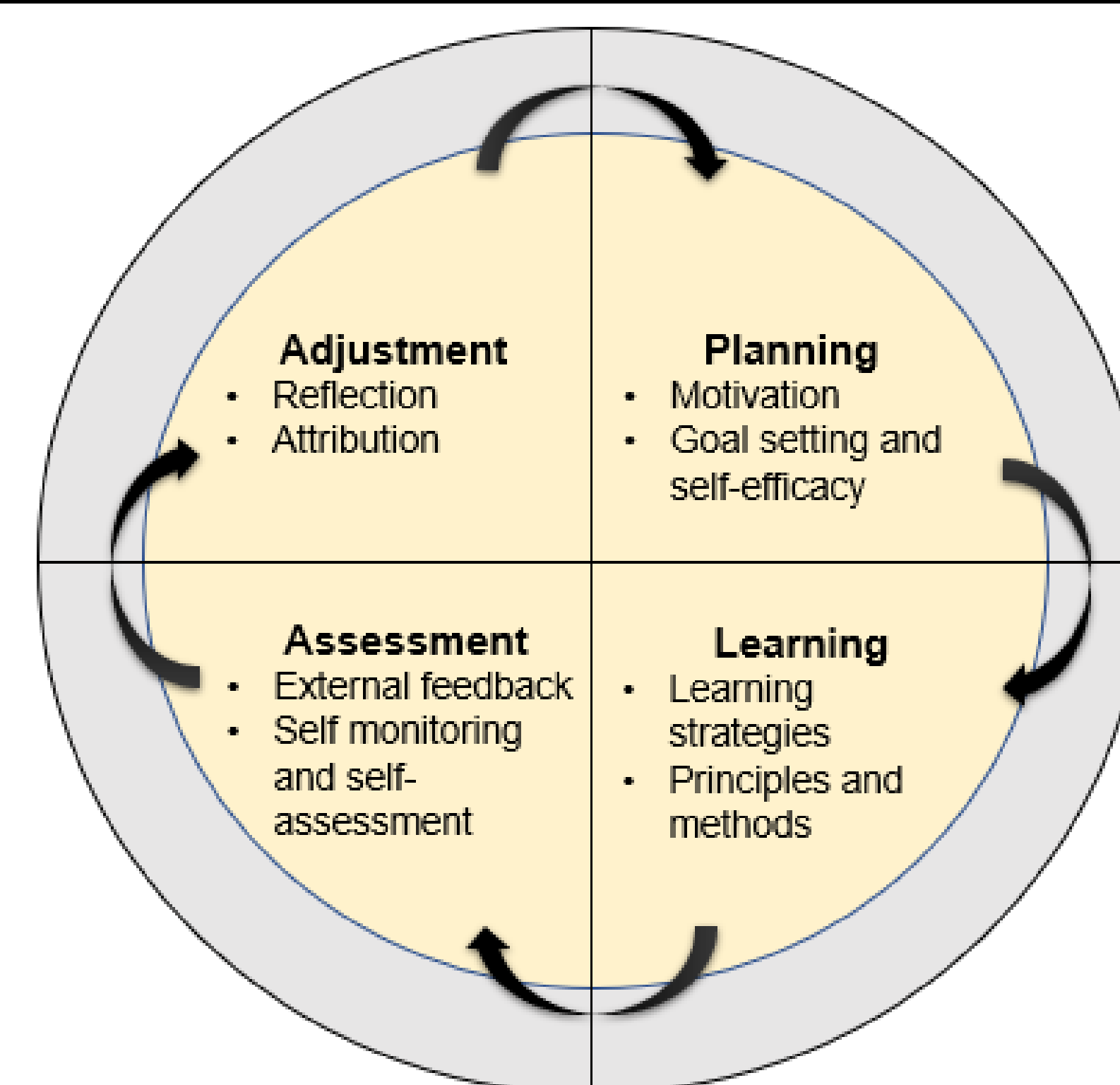


Figure 1: Self-regulated Learning Theory Themes. Adapted from White et al. (2014).³

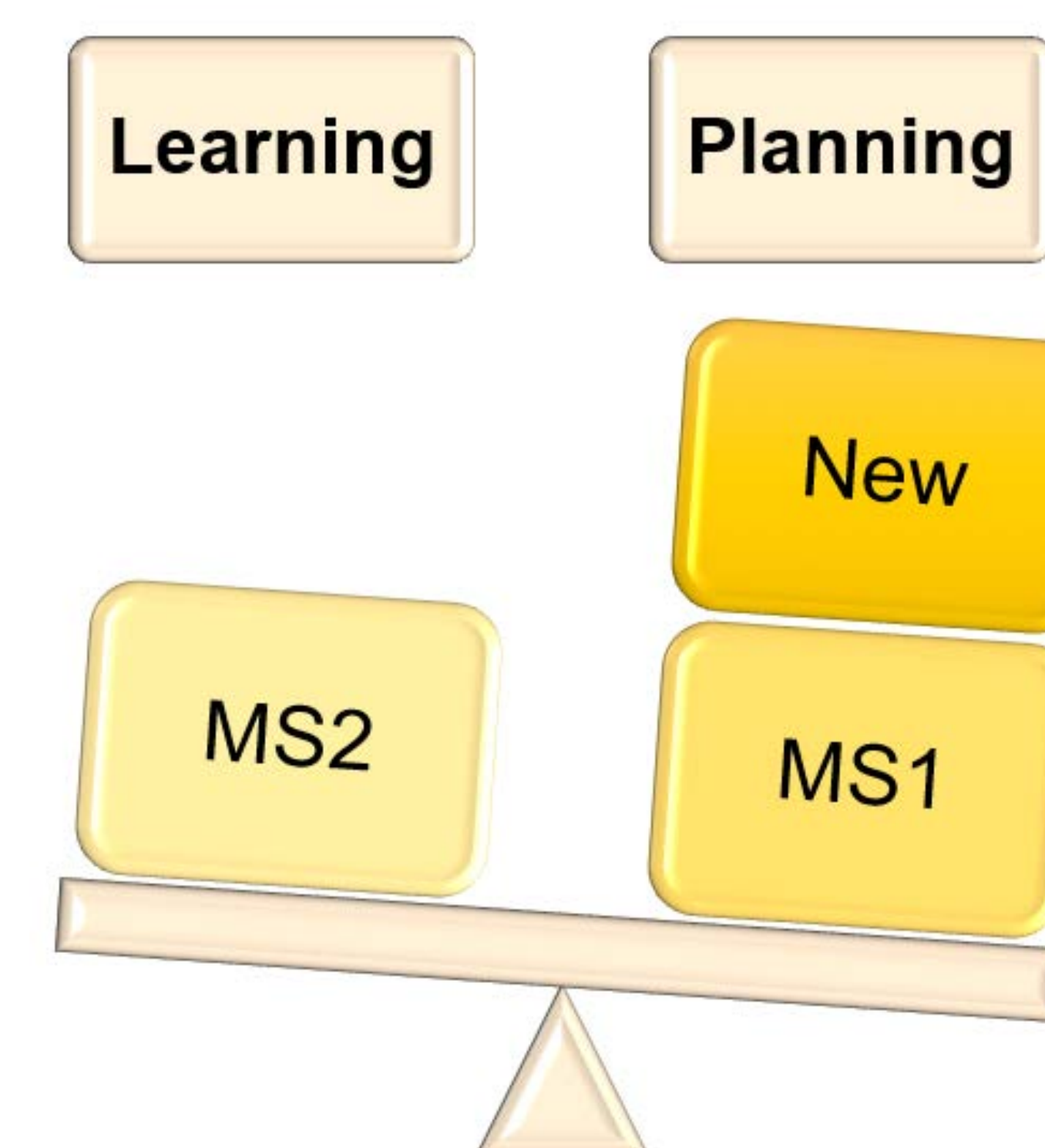


Figure 2: Predominant Theme Emphasized in Pre-clinical Definition of Self-directed learning by Year

Theme of Focus to Define Self-Directed Learning

- Second-year medical students: Learning – Learning strategies, styles, and methods to accomplish provided objectives.
- First-year medical students: Planning – Goal setting, self-efficacy, and motivation in the context of an expected curriculum.
- Newly matriculated medical students: Planning > Learning to master assigned information.
- Assessment and Adjustment themes were neglected across each year.

Discussion

When defining self-directed learning, a gradient of transition from planning goals of education to using learning strategies is apparent from initial matriculation to the second year of pre-clinical curriculum without regard to assessment or adjustment.

Notably, students interpreted self-directed learning in the context of achieving faculty-defined objectives rather than defining their own learning outcomes. This poses a potential disconnect from the intention to facilitate development of lifelong learning skills.

In conclusion, the pre-clinical curriculum must better emphasize the purpose and components of self-directed learning in addition to allotting sufficient time for achievement to encourage unified understanding of self-directed learning and development of lifelong learning skills.

The limitations of this study include the small sample size of the focus groups and confinement to one institution. Future studies could broaden the sample size, include multiple institutions, and incorporate medical students in the clinical years to further stratify the development and evolution of the meaning of self-directed learning.

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