THE OHIO STATE UNIVERSITY
COLLEGE OF MEDICINE

Trends in Medical Student Use and Preferences for Supplemental Educational Resources

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Disclosures

- None

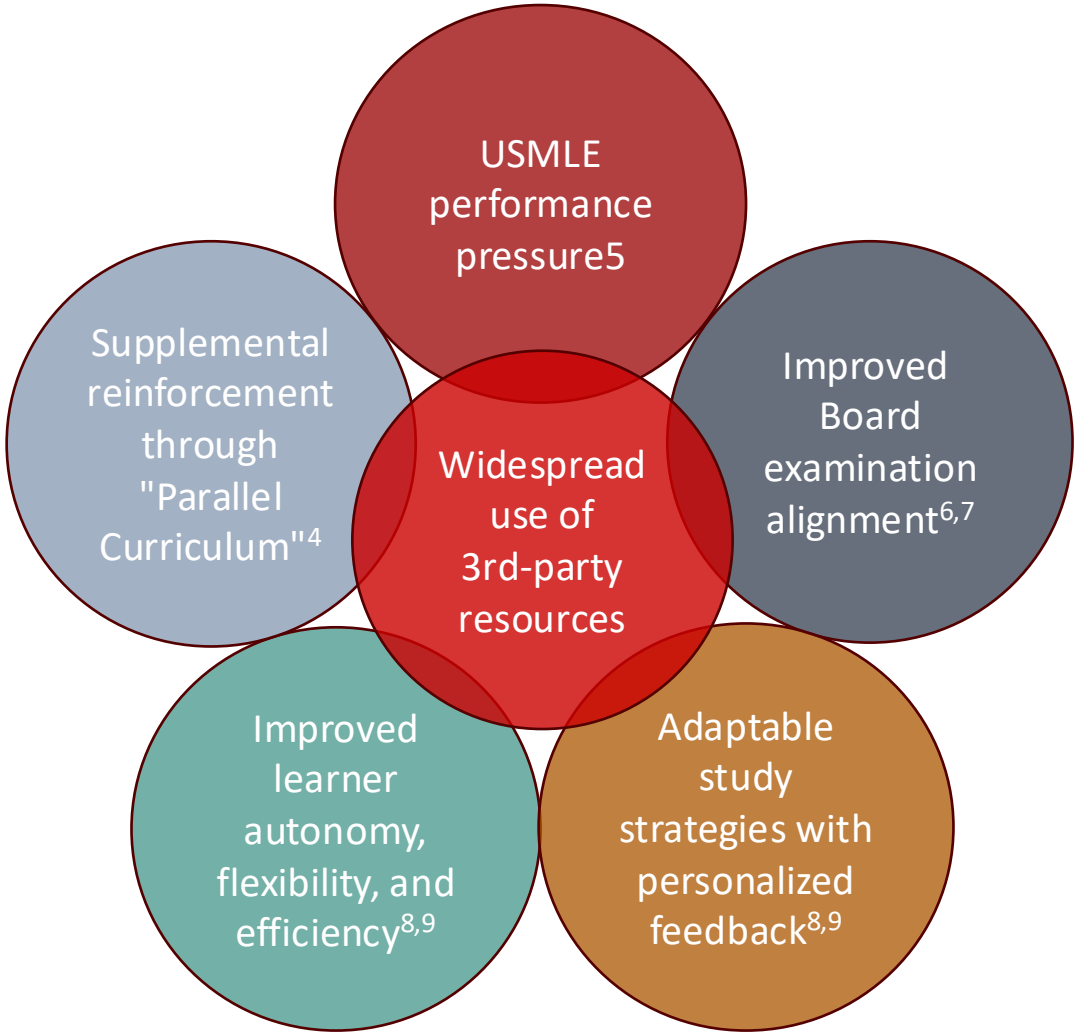
Background

The Changing Landscape of Medical Education

- Undergraduate medical education (UME) has shifted to learner-centered, technology-enhanced learning as the volume and complexity of medical knowledge expands.[1]
- The availability of digital resources designed to support a variety of learning styles have rapidly expanded.[2,3]
- Technology-based learning improves knowledge retention and learner satisfaction compared to traditional lecture-based instruction alone.[2]

Background

"Parallel Curriculum" in Medical Education



Background

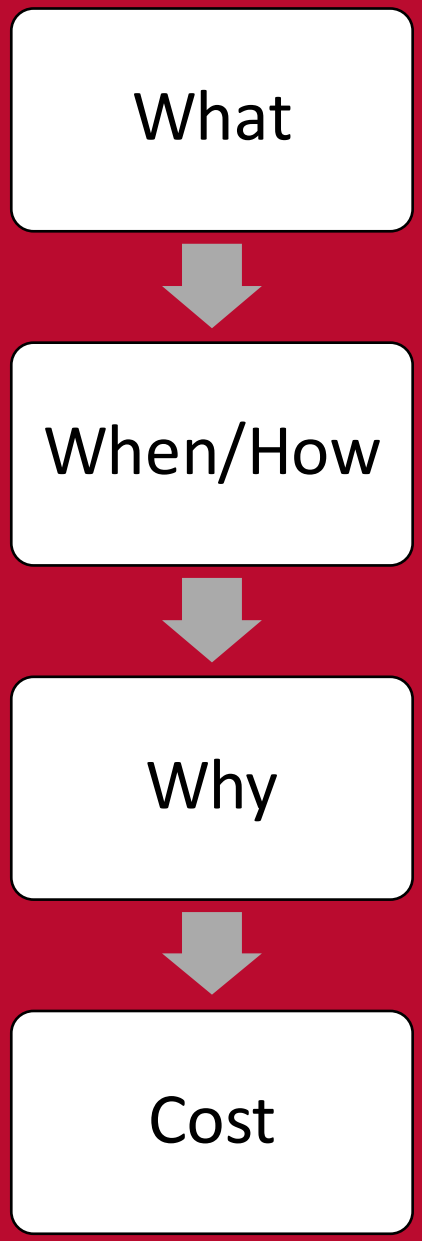
Benefits Vs. Challenges

Benefits	Challenges
• Efficient, concise learning[6,7] • Supports self-directed learning[8,9] • May improve exam performance[4,10] • Spaced repetition[4,10]	• Financial burden • Curriculum misalignment • Equity and access • Reduced faculty engagement[11,12]

Background

Knowledge Gap

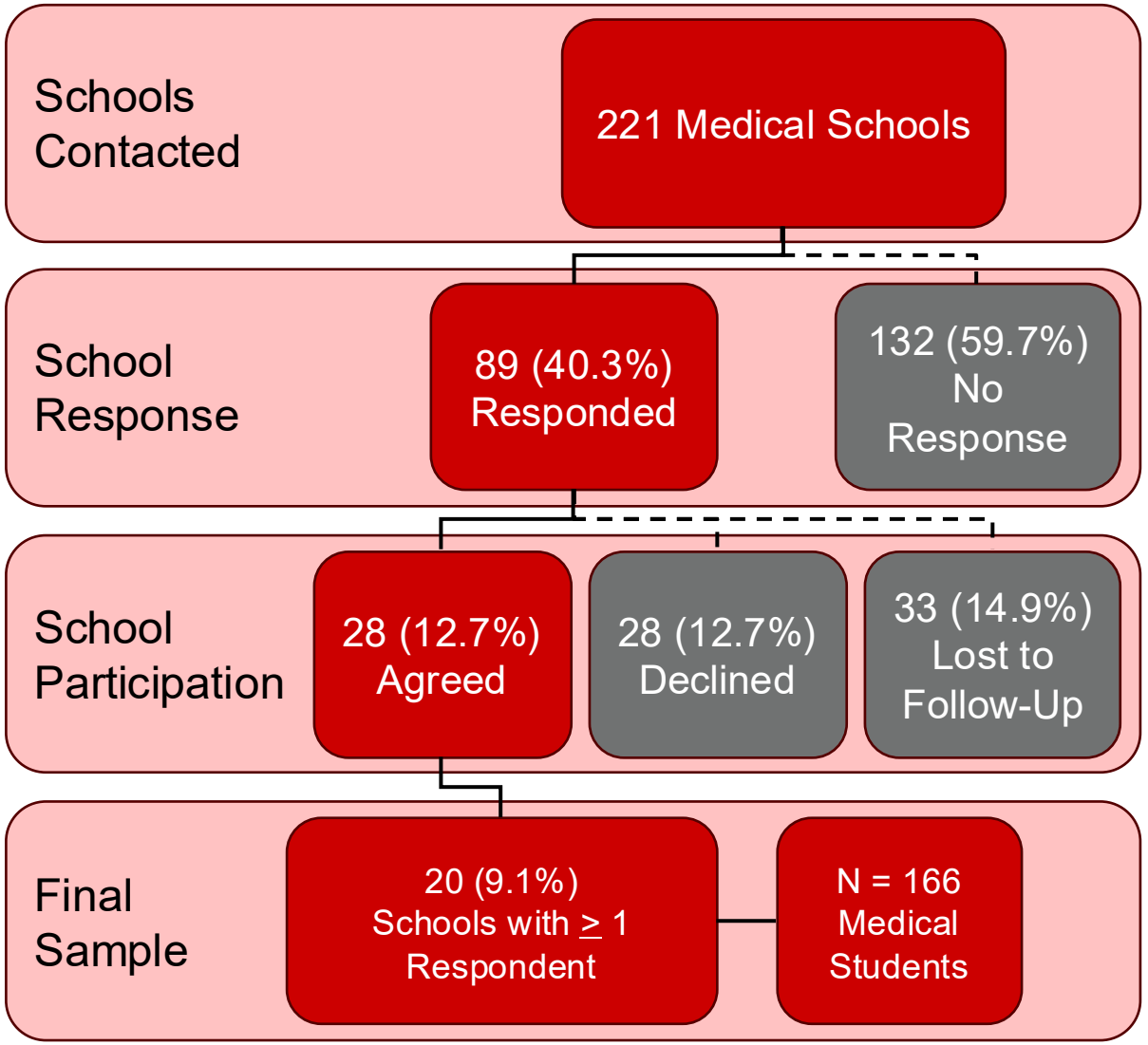
- Existing literature suggests variability in association between 3rd-party usage and academic performance
- There remains limited data on:
  - How and why medical students use 3rd-party resources
  - Integration of 3rd-party resources with curriculum
  - The proportion of students who primarily rely on 3rd-party resources
  - Learner preferences
  - Financial burden



Study Objectives

- Describe U.S. medical students' use of 3rd-party educational resources across MD and DO programs.
- Characterize when these resources are used and the extent to which they function as primary learning tools.
- Examine why students use these resources and how use relates to learner preferences and curricular perceptions.
- Assess the financial burden associated with accessing 3rd-party resources.

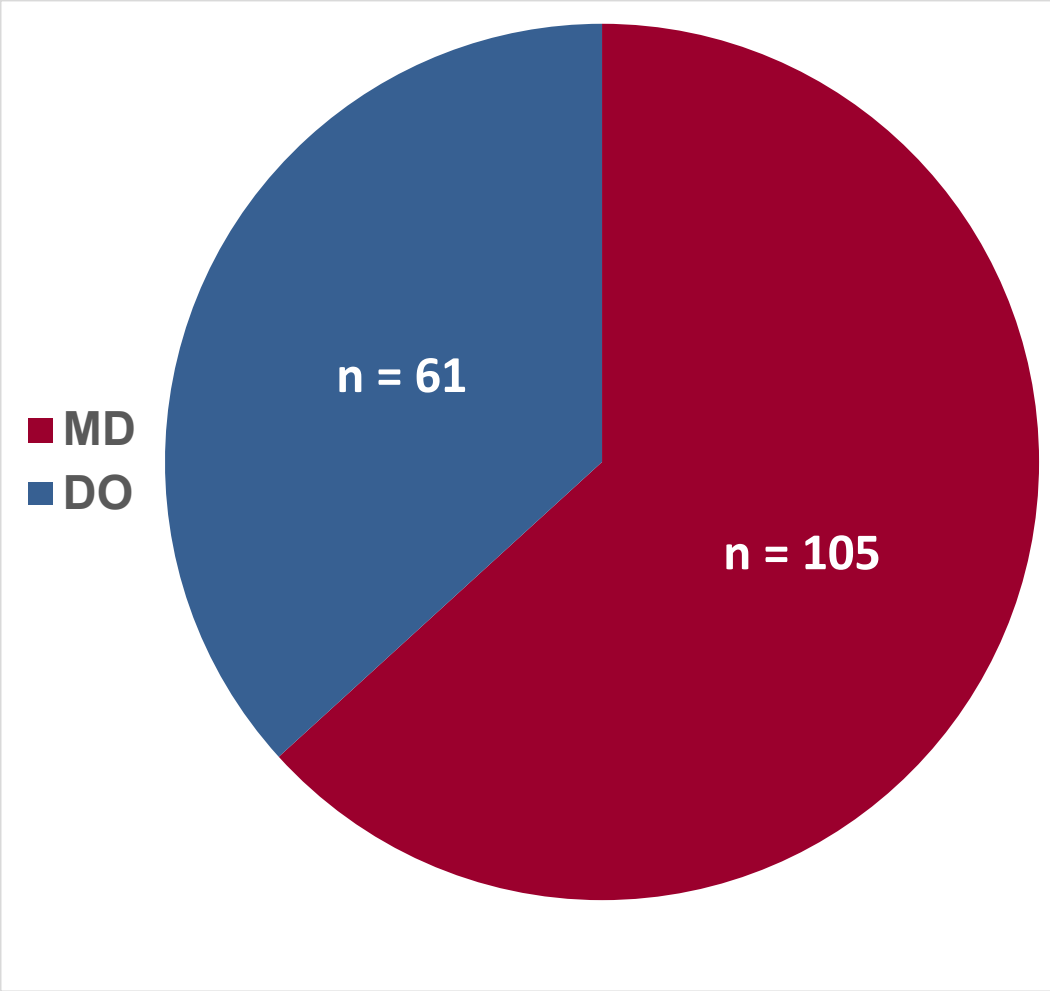
Methods



- Cross-sectional electronic survey of U.S. MD and DO students
- Questionnaire captured:
  - Learner demographics and institutional context
  - Educational values and curricular perceptions
  - 3rd-party resource use, timing, motivations, and cost

Results

Respondent Characteristics

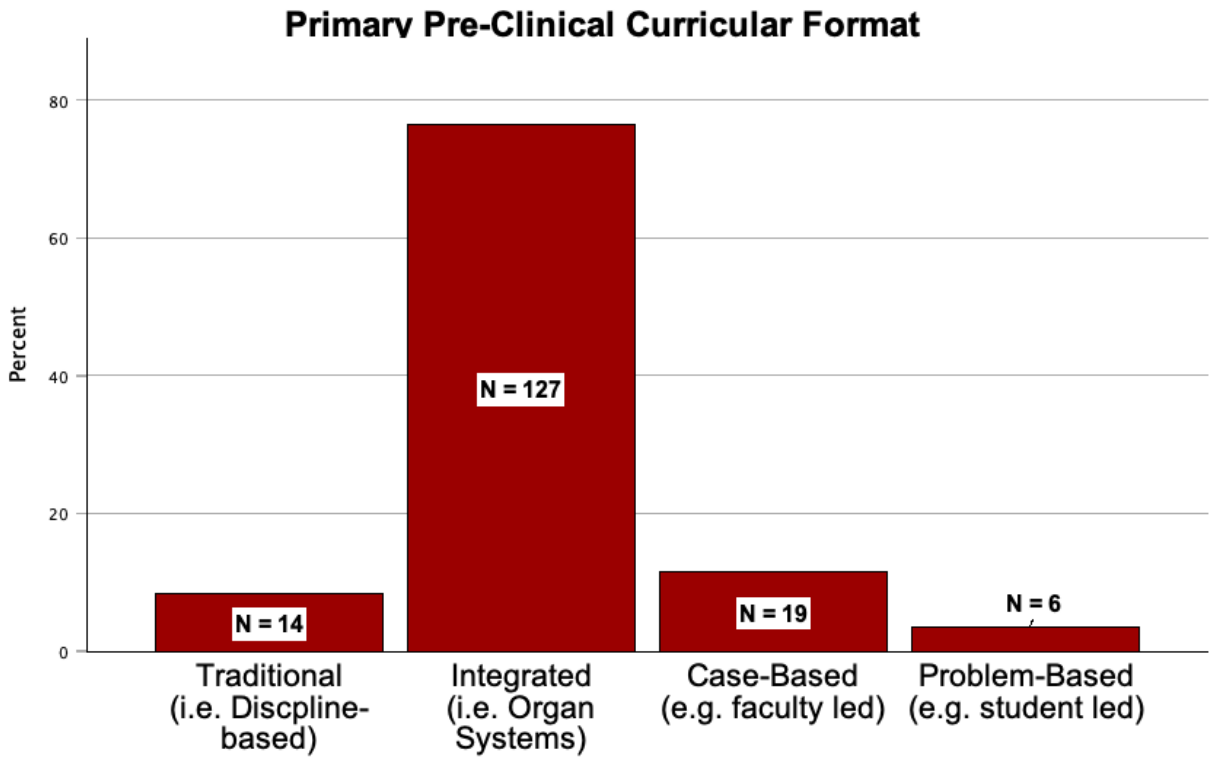


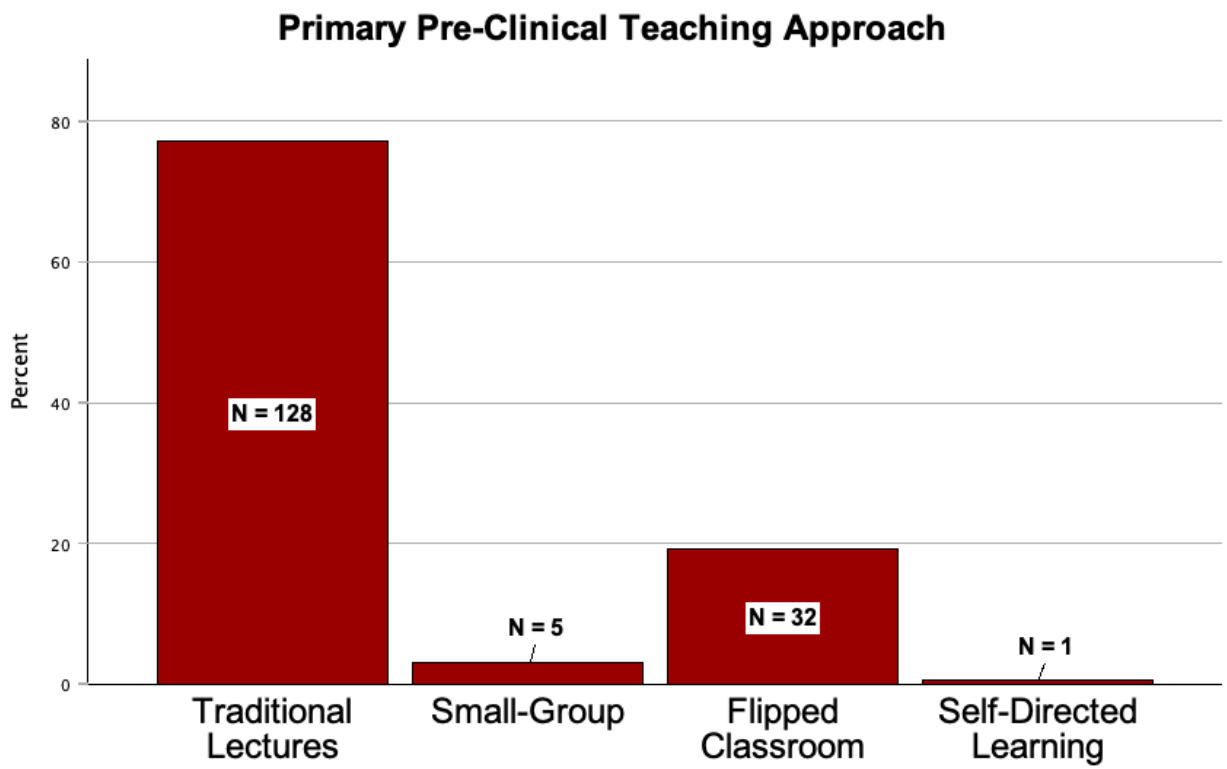
- N = 166
- 63.3% MD, 36.7% DO
- 75.9% First- Generation Medical Students
- 31.3% Class of 2028
- 25.3% Class of 2027
- Median age 25.5 years (range 22 – 42)

Results

Institutional/Curricular Context

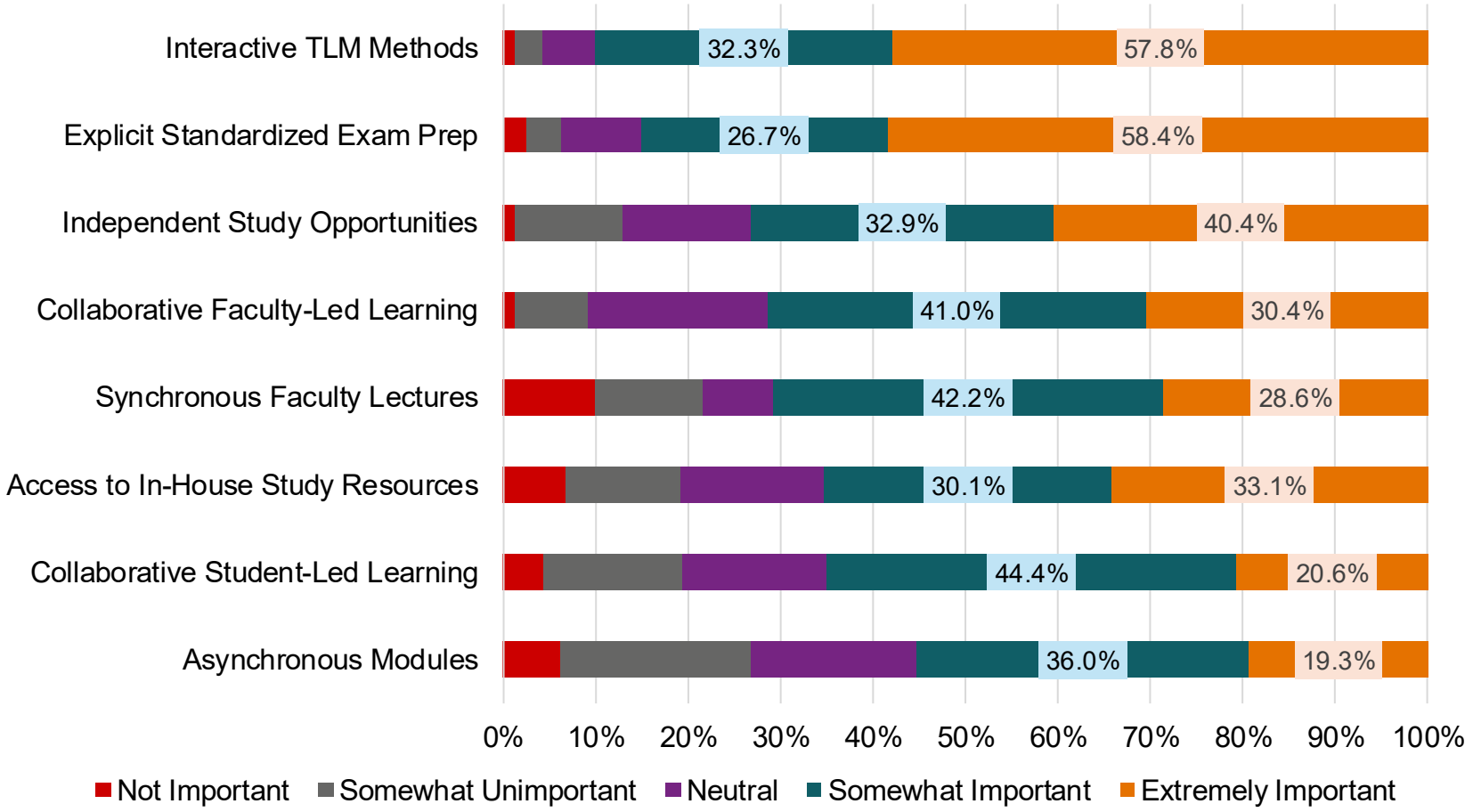
92.2% of students reported that their school provides access to at least one 3rd-party resource





Results: Curricular Elements

Students Value Interactivity, Exam Prep, and Independent Study

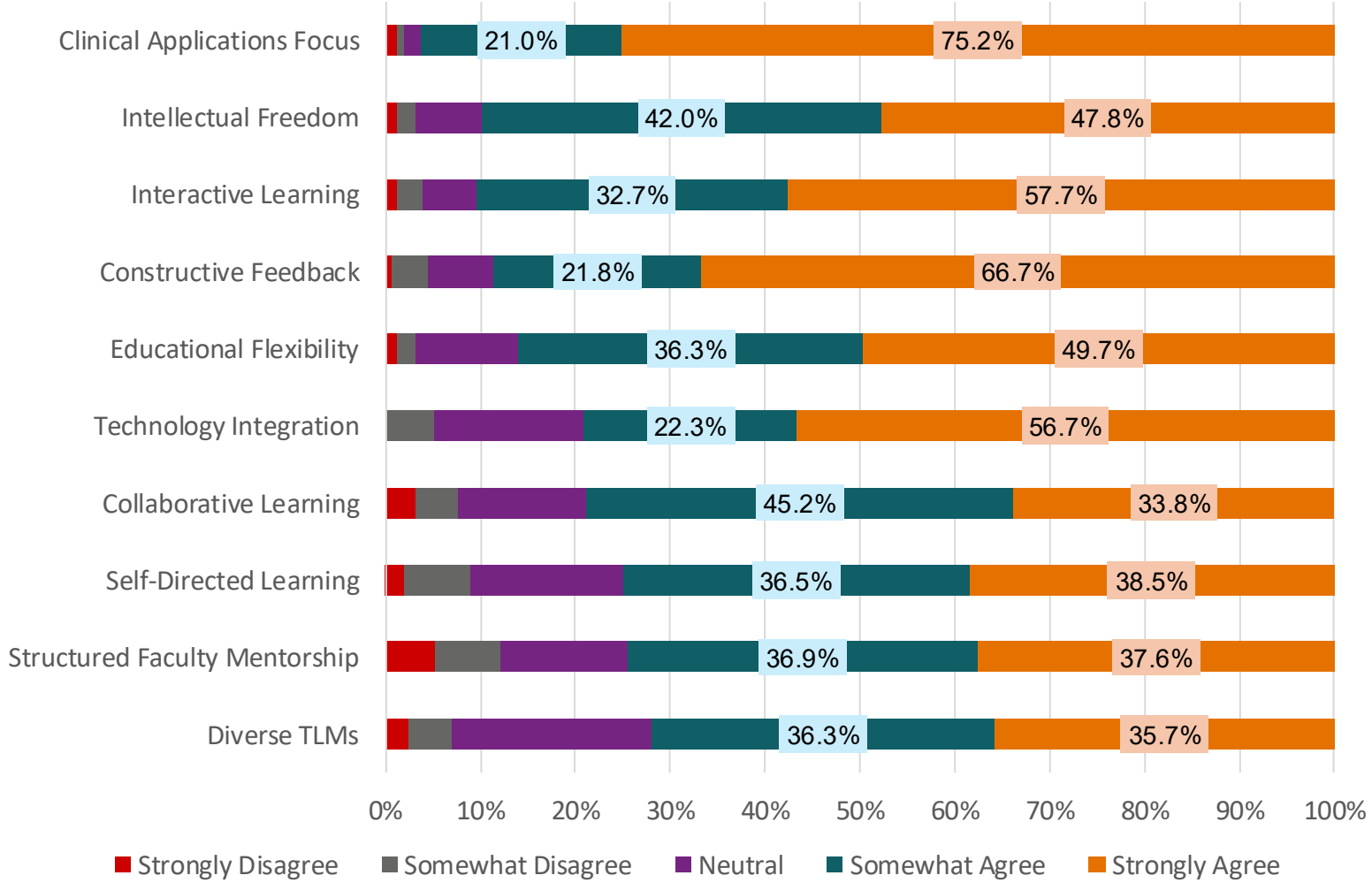


*Percentages reflect valid responses for each item; item nonresponse was excluded from percentage calculations

- **Interactive methods** and **explicit standardized exam preparation** were the most highly valued curricular elements
  - ~58% rated both extremely important
- **Independent study opportunities** were also strongly valued
  - 40.4% rated them extremely important
- **Asynchronous modules** were valued less strongly than interactive or exam-focused approaches
  - 19.3% rated them extremely important

Results: Educational Values

Students Value Clinical Relevance, Feedback, Interactivity, and Flexibility

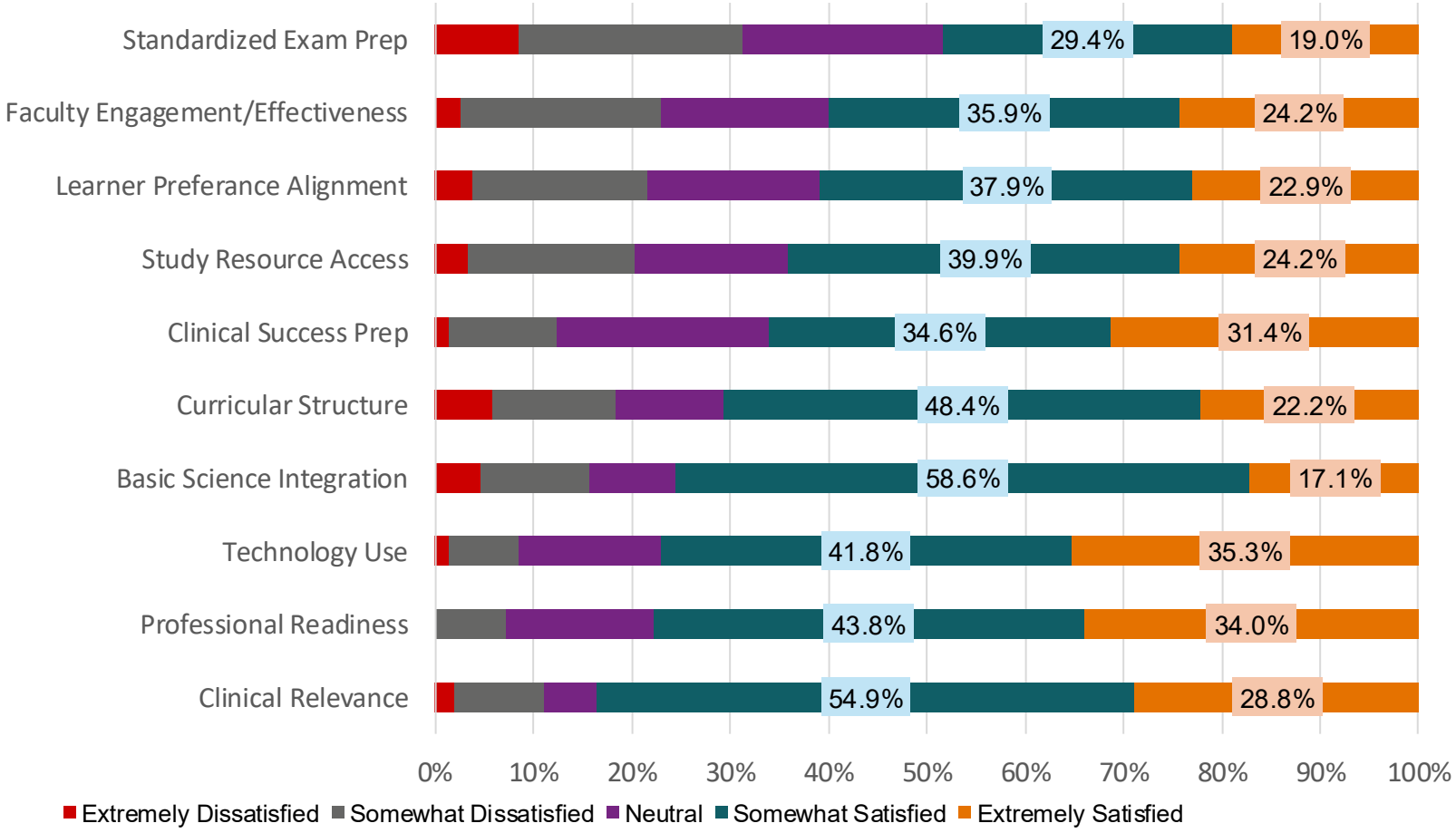


Percentages reflect valid responses for each item; item nonresponse was excluded from percentage calculations

- **Clinical application makes education more meaningful**
  - 75.2% strongly agree
- **Timely constructive feedback supports learning**
  - 66.7% strongly agree
- **Learning is more enjoyable when interactive**
  - 57.7% strongly agree
- **Technology improves educational experience**
  - 56.7% strongly agree
- **Flexibility in approach to education is valuable**
  - 49.7% strongly agree

Results: Institutional Satisfaction

Students' Report Stronger Satisfaction with Clinical Relevance than with Exam Prep or Learner-Method Fit

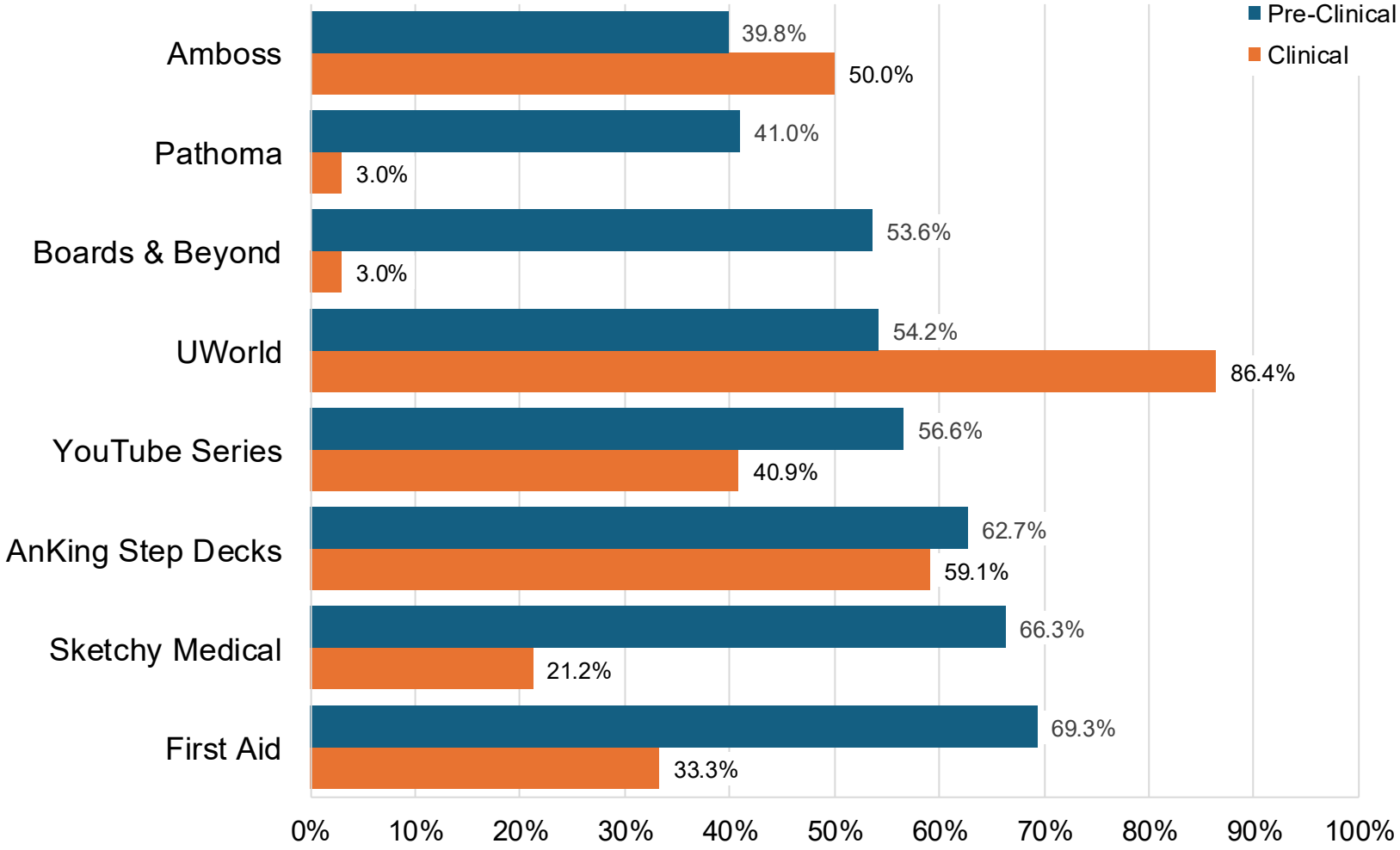


*Percentages reflect valid responses for each item; item nonresponse was excluded from percentage calculations

- **Clinical relevance** was one of the strongest-rated curricular areas
  - 83.7% somewhat/extremely satisfied
- **Applicability to professional aspirations** was also rated favorably
  - 77.8% somewhat/extremely satisfied
- **Preparation for standardized examinations** was one of the weakest areas
  - 48.4% somewhat/extremely satisfied
- **Availability of preferred learning methods**
  - 60.8% somewhat/extremely satisfied

What: 3rd-Party Resource Use

Question Banks Remain Central Across Phases, while Pre-Clinical Use is Broader and More Diverse

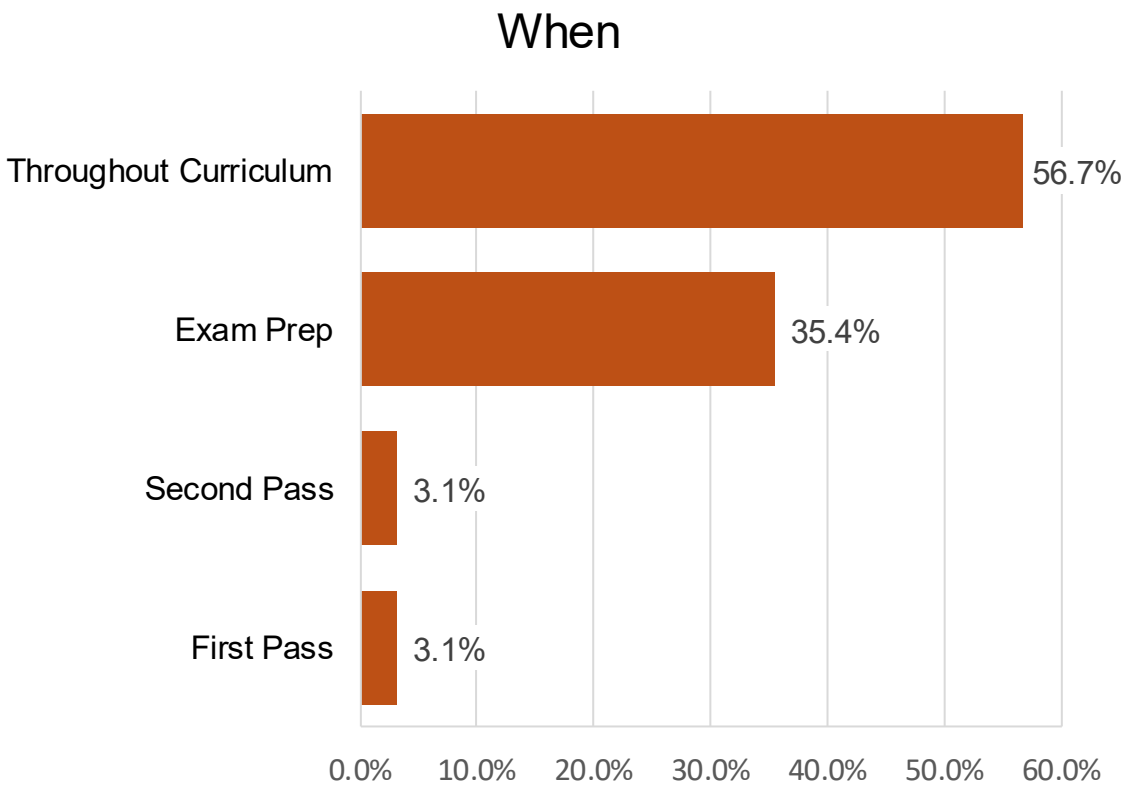


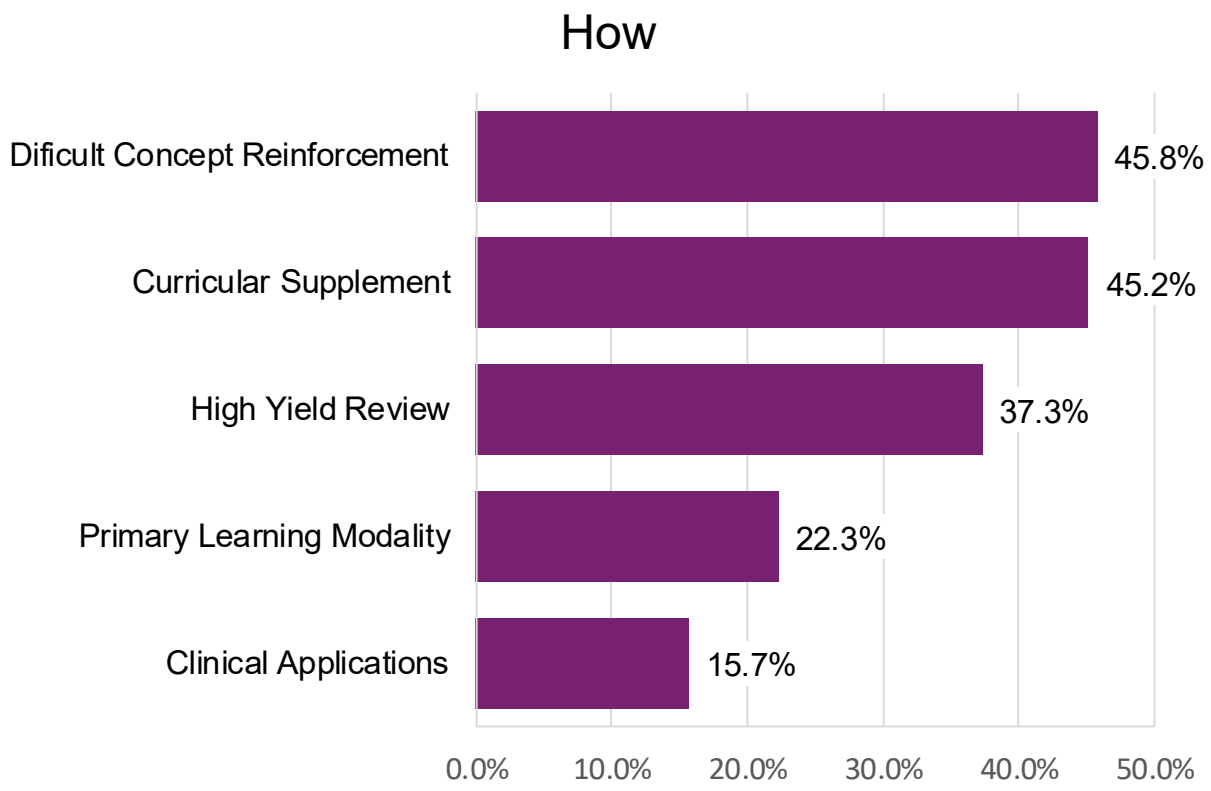
- **Pre-Clinical Dominant Resource Types**
  - Comprehensive video libraries (e.g., Boards & Beyond, Pathoma)
  - Spaced-repetition tools (e.g., AnKing)
  - Text-based review resources (e.g., First Aid)
  - Long-form concept review
- **Clinical Phase Prominent Resource Types**
  - Question-banks (e.g., UWorld, Amboss)
  - Topic-specific videos (e.g., YouTube)
  - Spaced repetition/visual mnemonics
  - High-yield rapid review tools

**Percentages reflect valid cohort-specific responses for each item; item nonresponse was excluded from percentage calculations*

When/How: 3rd-Party Resource Use

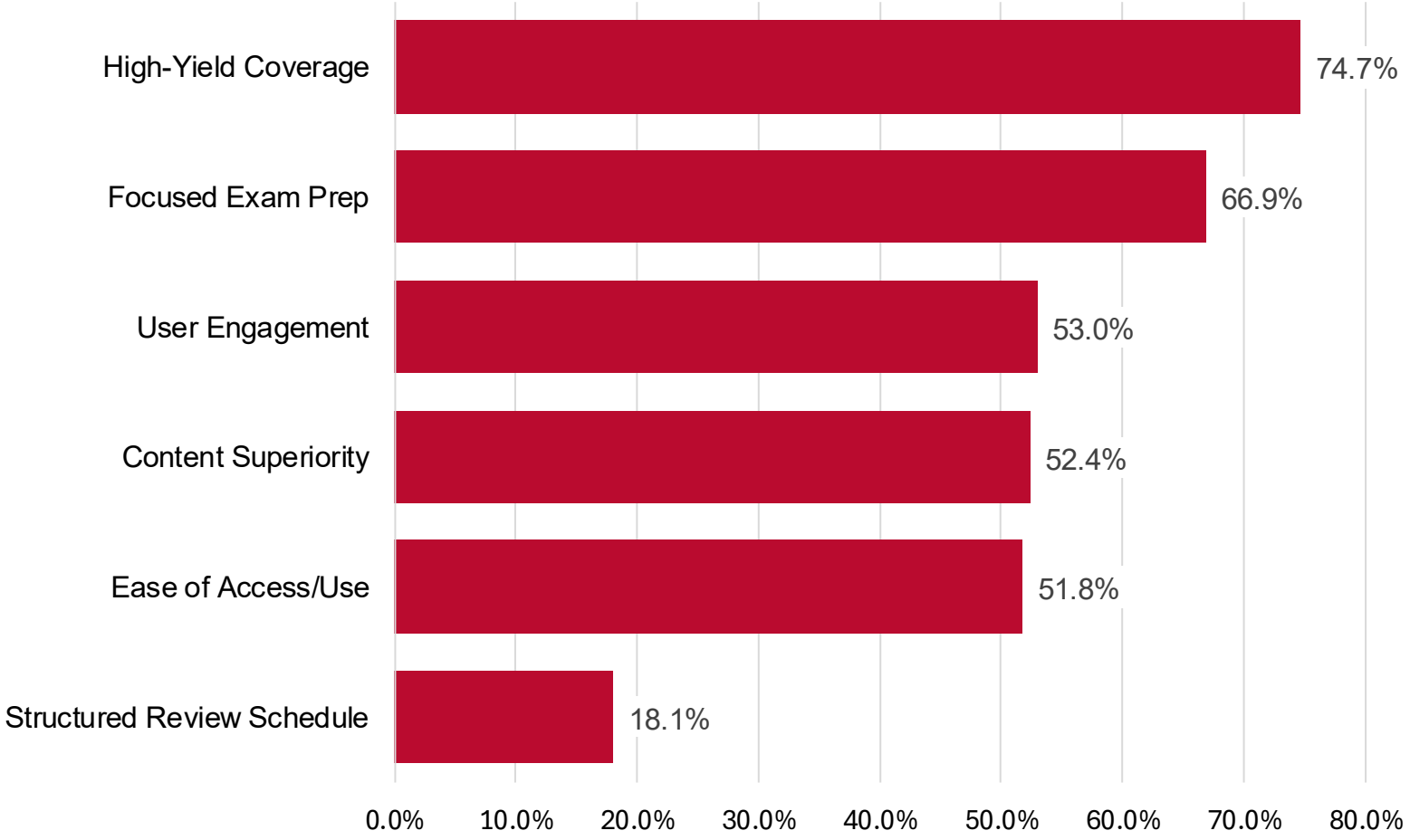
Use is Characterized by Longitudinal Integration that is often Supplemental in Nature





Why: 3rd-Party Resource Use

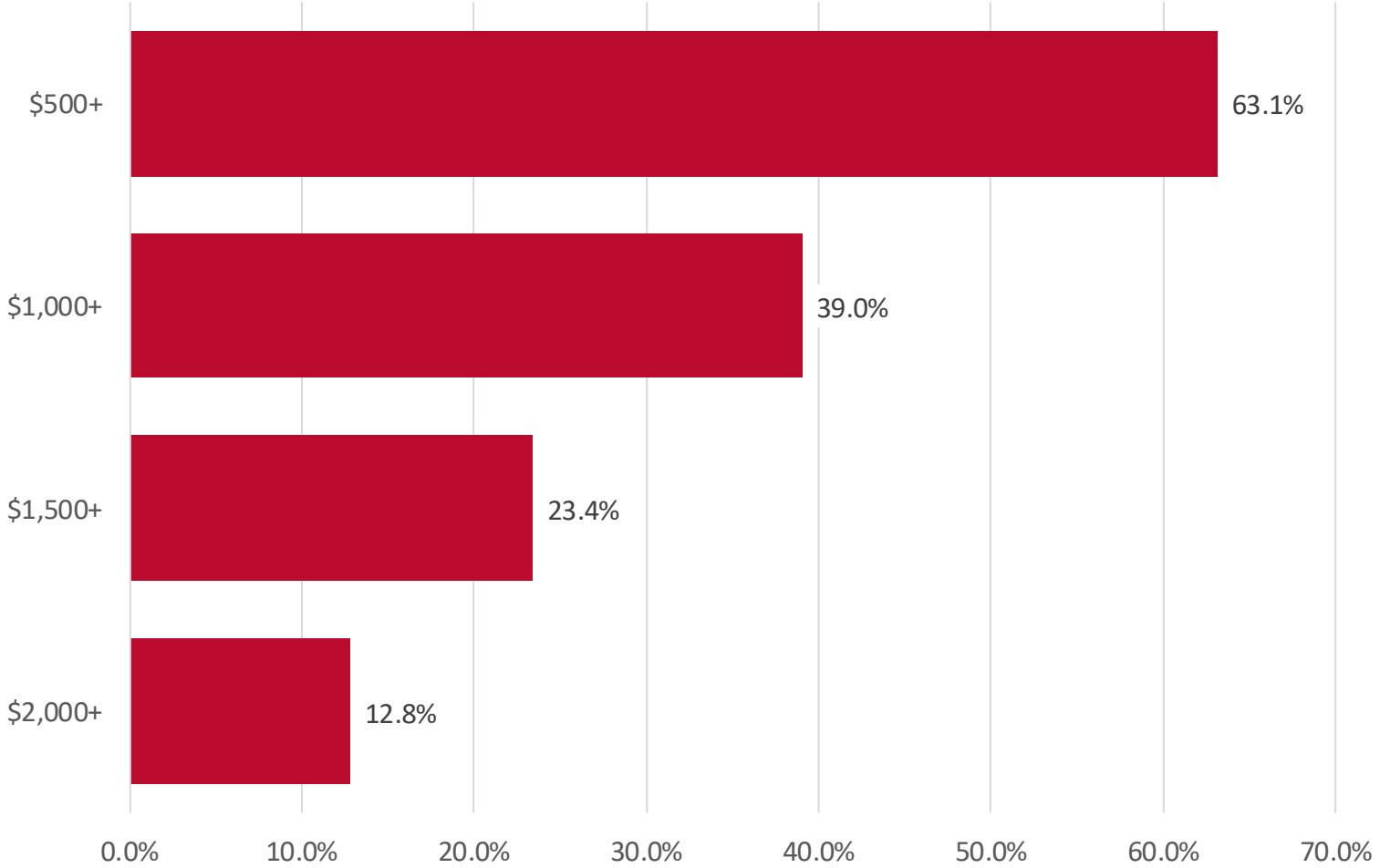
Drivers of Use Go Beyond Simple Efficiency Benefit



- Students appear to use 3rd-party resources for **exam alignment**, **engagement**, **quality**, and **usability**, not just convenience
- **Better coverage of high-yield concepts –** 74.7%
- **Focused standardized exam preparation –** 66.9%
- **More engaging user experience than institutional resources –** 53.0%
- **Higher quality content than institutional resources –** 52.4%
- **Ease of access and usability –** 51.8%

Cost: 3rd-Party Resource Use

Students Opt for 3rd-Party Use Despite Meaningful Financial Burden



51.8% of students reported accessing 3rd-party resources caused **Moderate-Severe** or **Extreme** financial burden

Perceived Curricular Fit

Students Perceive 3rd-Party Resources as Better Aligned with their Learning Needs

58.9% believed 3rd-party resources were better suited to teaching modern medical students

27.7% were unsure

13.5% did not agree

Limitations

- School-level recruitment attrition and modest student participation limit generalizability
- Potential institutional and student-level selection/nonresponse bias
- Cross-sectional, self-reported design precludes causal inference
- Missingness and subgroup denominators, especially in clinical-phase items, may affect precision of some estimates

Discussion

What Students Want: Better Alignment, Better Questions, Better Flexibility

- More **NBME/board-style assessments**
- Better **integration of 3rd-party resources**
- Greater focus on **high-yield/board-relevant content**
- More **interactive and small-group learning**
- Greater **flexibility/autonomy** and less reliance on low-yield mandatory sessions
- Concerns about **outdated asynchronous lectures** and variable lecture quality

Key Takeaway:
Students appear to use 3rd-party resources not just as supplements, but as responses to perceived misalignment among curriculum, assessment, and learning preferences.

Next Steps

Closing the gap between student preference and curricular requirements

- Explore faculty-based perspectives on the evolution of modern medical learning
- Pilot institutionally supported 3rd-party integration
- Compare outcomes before and after board-aligned curricular redesign
- Assess effects on satisfaction, cost burden, and exam preparation

At OSUCOM, we will be applying lessons learned to the development and testing of an in-house, curriculum aligned educational hub

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