

Evaluating Students' Use of Resources in a High-fail Course



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BIO150 Course

- BIOL150 is an introductory biology course for science majors and students fulfilling a natural science with lab general-education requirement.
- BIOL150 is a high-fail course: course with DFW or fail rate substantially above college average (often >20–30% depending on institution).



Question

What resources are needed to improve students' performance in BIOL150?

Aims of Project

- Introduce a variety of learning resources
- Evaluate students' use of resources
- Evaluate students' perceived impact of resources on course performance

Implementation

*Metacognitive
Planning*

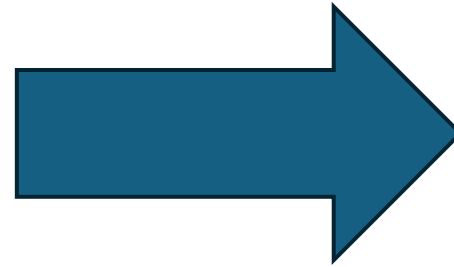
Peer Learning



Fall 2025 BIOL150 Course

*Concept
Mapping*

*Elaborative
Interrogation*

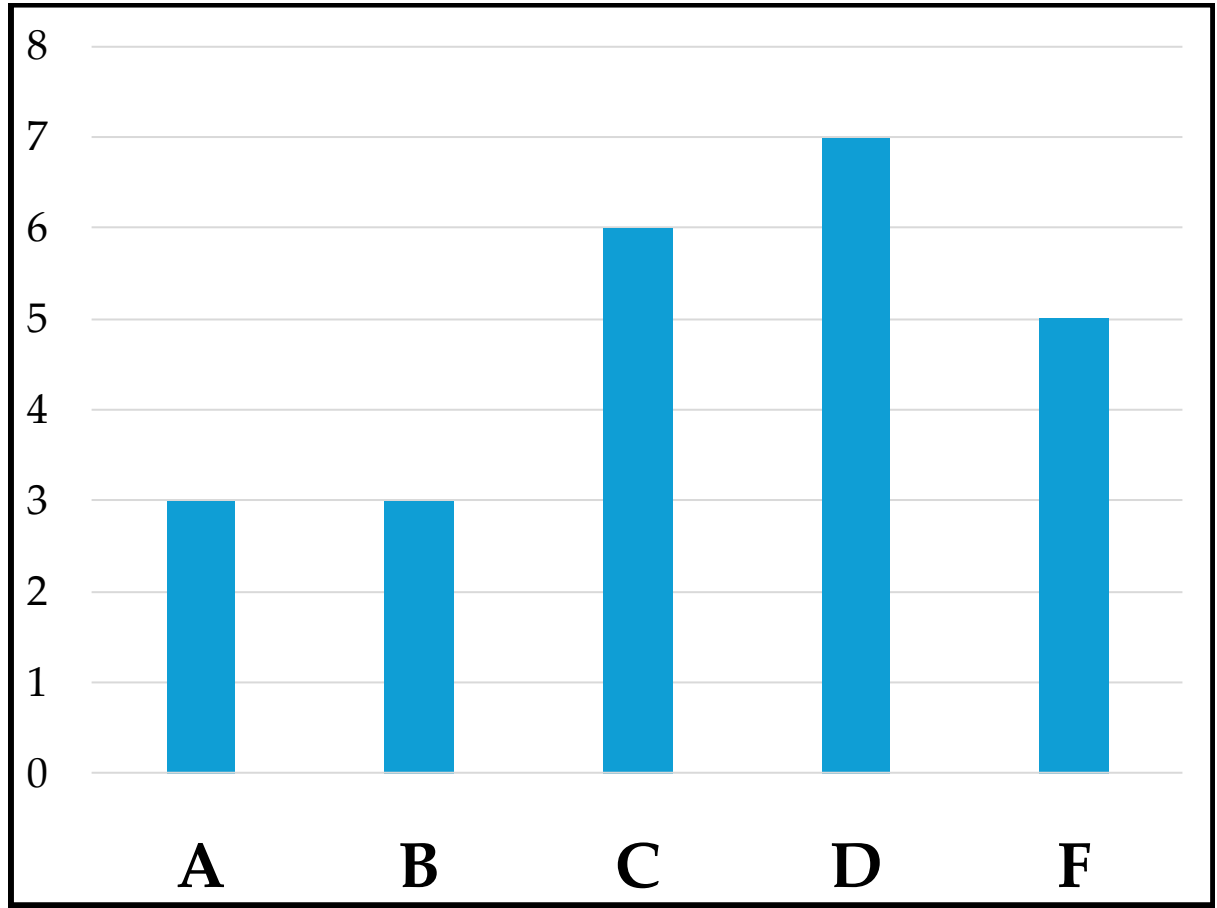


Evaluation

1. Course Outcomes
2. Student Surveys /Interviews

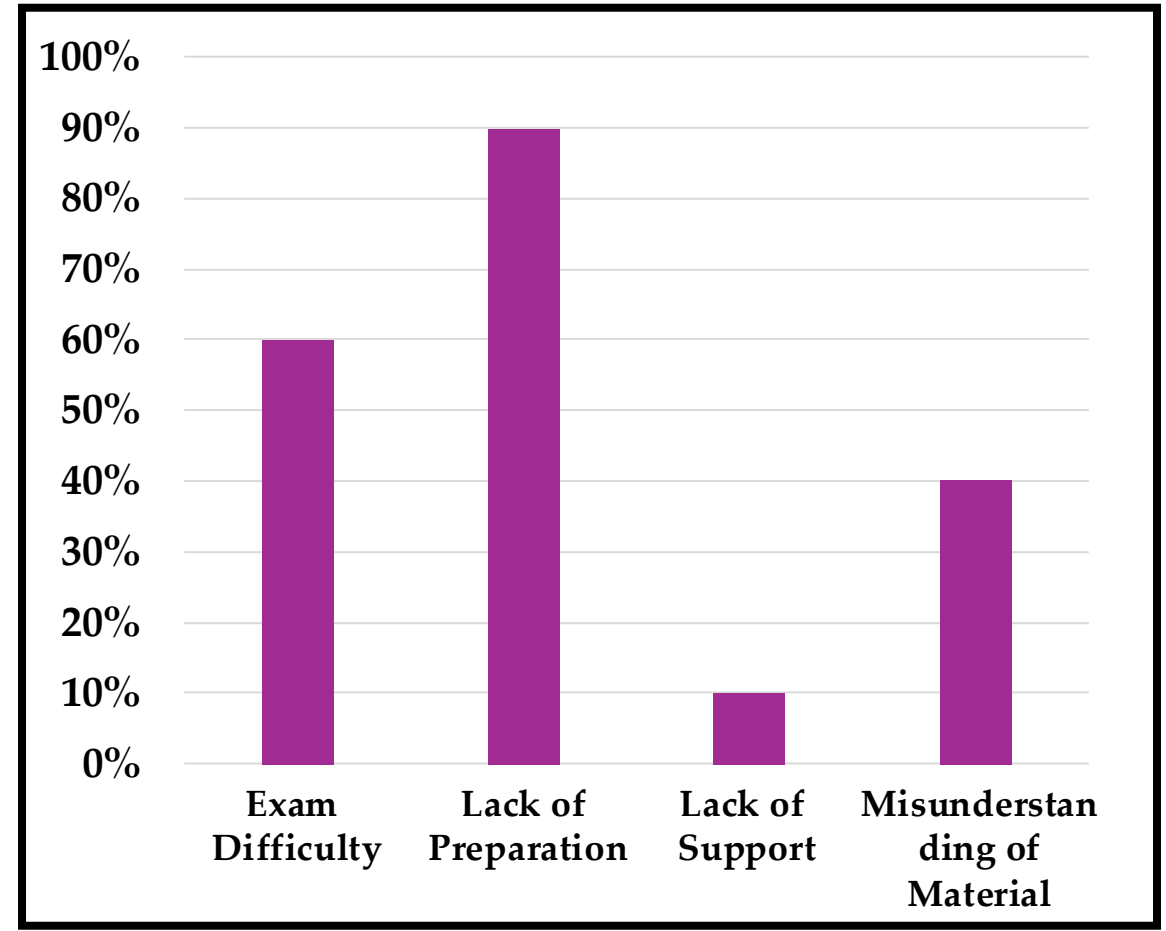
Question 1: Why students fail (in their words)?

BIOL150 Exam 1 Grades



n = 24

D/F Student Responses



n = 8

Implementation

*Metacognitive
Planning*

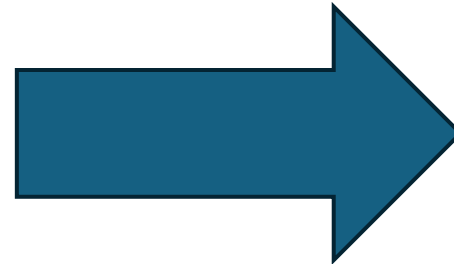
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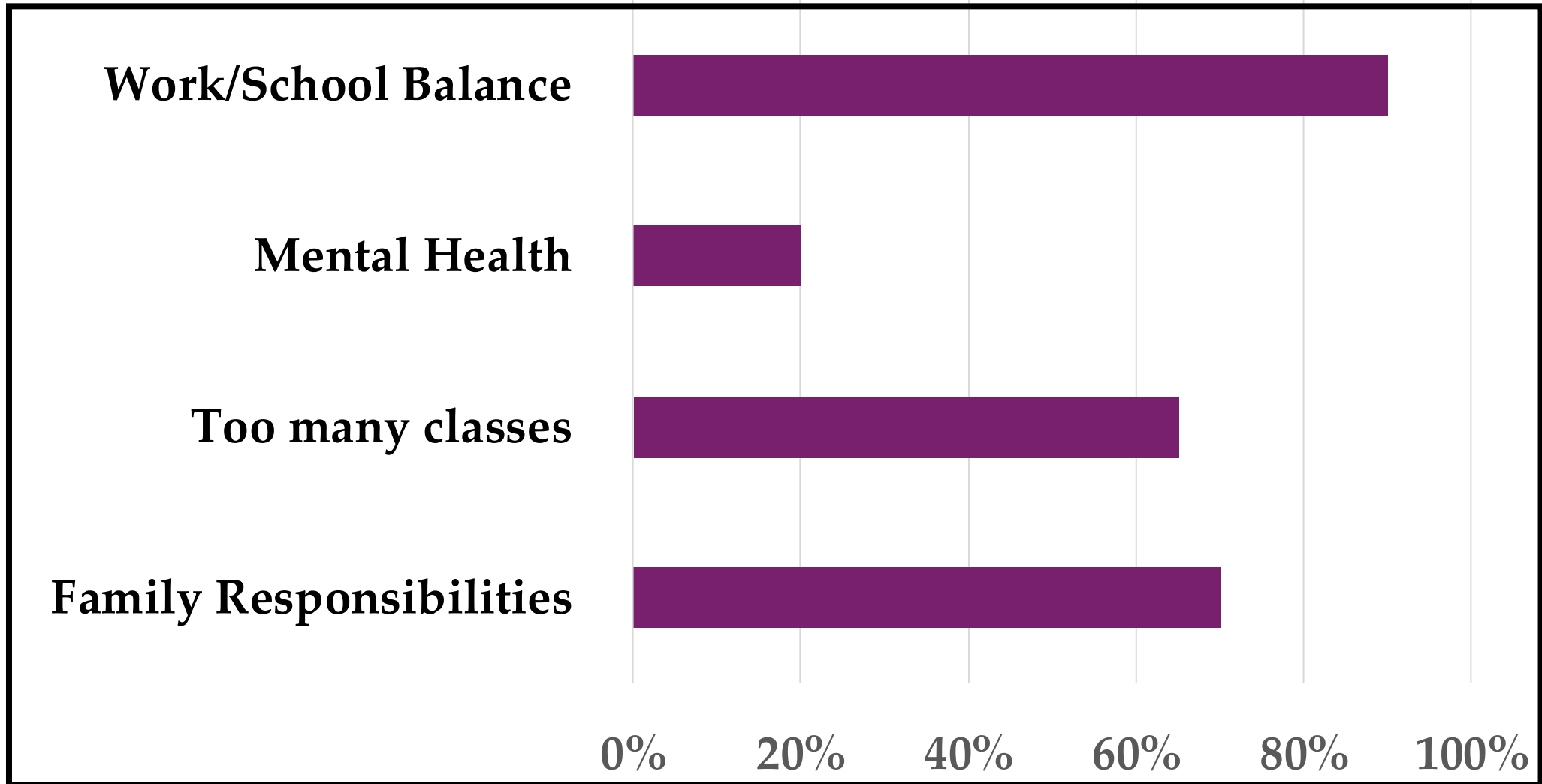
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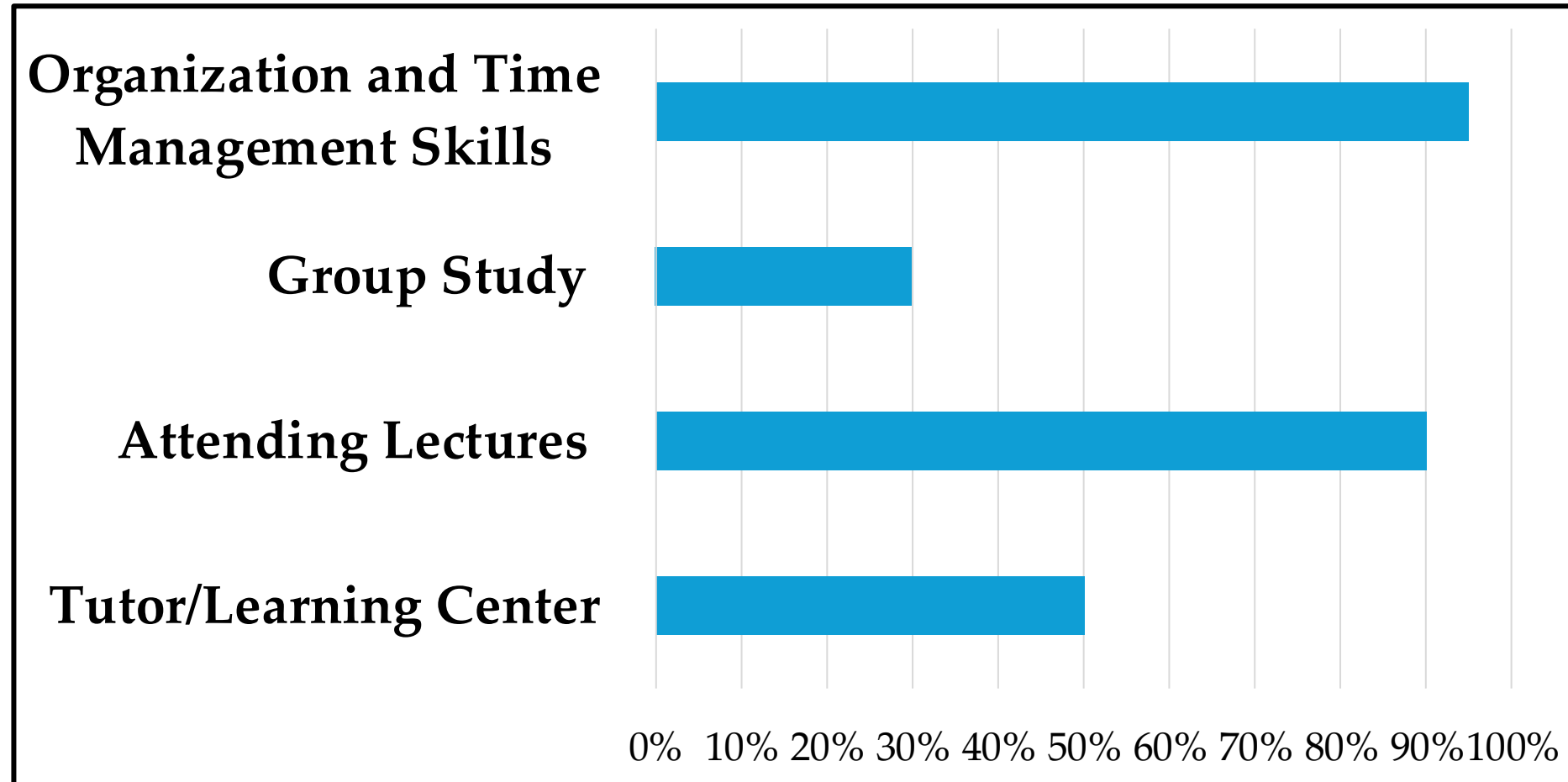
Evaluation

1. Course Outcomes
2. Student Surveys /Interviews

Question 2: What barriers exist to student learning?



Question 3: What resources were the most effective for students in the course?



Conclusion

- Students stressed the importance of learning time management as the major key to success in BIO150.
- Students also highlight the importance of a safe, engaging, and supportive learning atmosphere.
- Students feel that the skills gained in the course are useful for the rest of their academic journey.

Student Responses

"I feel like more professors should give their students time one on one and make it a safe space for student to feel Comfortable asking for help." – Student 1

" Personally, this class helped me improve my time management and study habits, which will be helpful in my future classes" - Student 2

Personally, this class helped me improve my time management and study habits, which will be helpful in my future classes
– Student 3