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How Students and Faculty Prepare for their Problem-Based Learning Small Groups

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INTRODUCTION

New competency-based curriculum adopted in 2016:

- Content organized around 93 patient complaints and concerns, integrating basic, clinical and social sciences.

Small groups of 8 students and a clinician-educator:

- Groups meet for two hours, twice weekly in Year 1 and continue into Year 2 meeting once per week.
- Flipped classroom model. Students prepare in advance and apply that knowledge by talking through both clinical and basic science aspects of cases in small group.

Materials students use for small group preparation:

- Big picture statement and weekly learning objectives
- Key concepts with links to specific content resources
- Objectives and resources for each learning experience

Additional recourses for faculty use for small group preparation:

- PBL slides with comprehensive speaker notes
- Video briefings highlighting key teaching points

PURPOSE

In this study, we explored the similarities and differences in how faculty and students prepare for small group by asking the following questions:

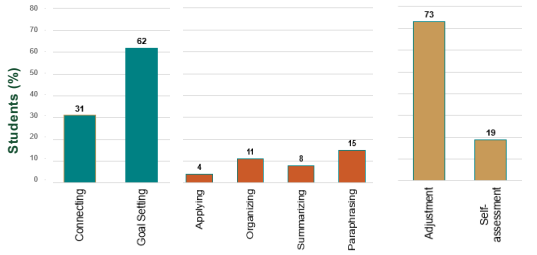
- In what ways do novice (student) and experienced (faculty) learners prepare themselves to participate in an integrated curriculum?
- What do these similarities and differences tell us about how faculty and curriculum developers can improve teaching and learning?

APPROACH / METHODS

- Two-part data collection strategy:
  - Year 1 and Year 2 students participated in 45-minute semi-structured interview about choice and use of resources
  - PBL faculty received anonymous survey about resources and preparation time dedicated to each resource.
    - Included two open-ended questions about personal preparation successes and short-comings

STUDENT PREPARATION

Frequency of Students' Self-Directed Learning Strategies (N=26)

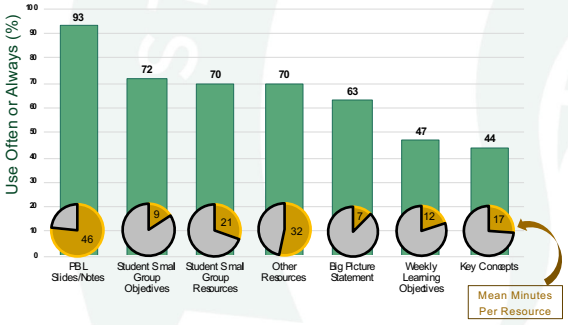


Adapted from Pintrich 2004

Student Example	Self-Regulated Learning
Starts by looking at **objectives and resources** - sees what resources are at her level (assumptions about vocab, etc)	• Planning/Goal Setting
Uses **videos and other resources** to gain background as needed	• Planning/Making Connections
Images and connections to keep track of central ideas and make connections - **notes often include pathway images**	• Monitoring/Selection of Cognitive Learning Strategies: Organizing)
After each reading, uses the **objective** to quiz herself	• Reflection/Self-assessment
If she can answer the **objective**, she stops there. If not, she moves onto the **next reading** for that objective	• Reflection/Adjustment

FACULTY PREPARATION

Which resources do you routinely use to prepare for small group? How much time do you spend? (N=43)



FACULTY PREPARATION

Faculty used "other" resources:

- First Aid
- UpToDate
- Textbooks
- Osmosis
- Khan Academy
- Dynamed
- Dr. Google
- YouTube
- Armando

Faculty confident in their use of faculty-specific resources.

Faculty wanted to improve:

- Anticipating students' challenges
- Knowledge of students' learning resources

DISCUSSION

Similarities	Implications
Both faculty and students initially assess scope of information to be reviewed and begin to prioritize learning	Curriculum developers should provide an overview for faculty and students explaining "big picture" of week and connections among learning objectives
Faculty and students learned to reflect on own strengths and weaknesses as learners to target where to focus	Faculty may benefit from support to help students engage in this type of self-reflection
Faculty and students paired learning needs to appropriate resources	Curriculum developers can help faculty and students understand the pros and cons of various curricular resources and outside resources
Faculty and students' preparation is motivated by their desire to maintain the long-term relationships they form in small groups	Learning societies or other longitudinal group structures provide supportive relationships that can motivate and enhance learning
Differences	**Implications**
Faculty need preparation to anticipate likely points of confusion for students	Faculty development groups can support faculty by helping them understand learning progressions of students
Students need to learn to monitor their learning and enhance their self-regulated learning skills overall	Faculty developers can support faculty to guide and coach students to develop their self-regulated learning strategies

REFERENCES

Pintrich PR. A conceptual framework for assessing motivation and self-regulated learning in college students. Educ Psychol Rev. 2004;16(4):385–407.