

Complete Poll



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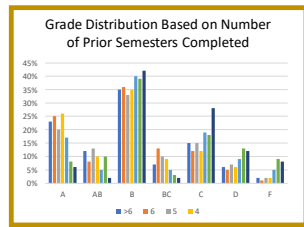
Improving Student Retention and Sense of Belonging Through Study Strategy Capacity Building in an Anatomy and Physiology Course

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BACKGROUND

- 600 undergraduates/year enroll in upper division A&P (8 sections; ~75 per section)
- 22% (~132) DFW Rate
- 9% (~54; 6.75/section) withdrawal rate
- Student performance and persistence correlates with academic experience



- Struggling students express disconnect between effort and success.

FRAMEWORK

- Not all students are equally prepared, but all have the potential for success.
- Imposter syndrome and exacerbate belonging uncertainty
- Students will be more successful when provided with knowledge and information on how to succeed.
- Peer involvement will improve receptivity and sense of belonging

OBJECTIVE

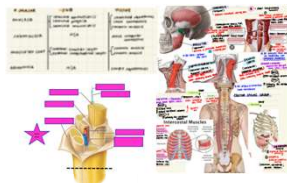
- Develop a culture through multiple avenues whereby students can support their peers.
- Evaluate these strategies to determine how they affect student performance, retentions and sense of belonging.

INITIATIVES

Study Tool Sharing:

Solicited to current and former students for study tools. These (n = 153) were reviewed and curated as examples for new students.

Example Study Tools



Types of Study Guides Provided by Students



Student can be successful with many different tools and techniques

Students Recommendations

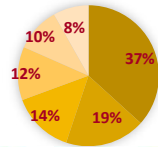
At the end of prior term students (n = 68) were asked to provide 3 recommendations (n = 408) for incoming students. These underwent inductive and deductive coding.

Ranked Recommendations

- Study with others/group >50% students
- Keep up with study goals/objectives 40-50% students
- Study regularly/daily
- Ask the instructor questions
- Study soon after class
- Start studying early (bit by bit)
- Draw/write out processes and diagrams
- Come to class
- Pay attention/actively listen to lecture
- Attend office hours
- Review several times/rewrite notes
- Watch videos (lecture/YouTube)
- Read textbook
- Try explaining the material (to self or others)
- Review material before class
- Write notes on Powerpoints
- Make connections, look for patterns
- Create questions/problems from the material and then test yourself
- Find/use outside resources
- Start with big concepts
- Make sure answers are correct and backed up
- Use Flashcards/Quizzes
- Start the quizzes early
- Put time into quizzes because points add up
- Seek out answers if you get something wrong
- Practice active recall
- Use Murphy learning Center/Tutoring
- Don't give up
- Use visuals
- Interact with the material
- Read out loud
- Place yourself on exams
- Sit in front

Most common recommendation was to study with a peer/group

Coding of Student Study Recommendations



- 37% Interacting with material
- 18% Use of alternative resources
- 14% Frequency of studying
- 12% Filling in knowledge gaps
- 10% Communicate about the material
- 8% Identify themes and connections

Feedback on value of Recommendations

Highly valuable	56.2% (41)
Somewhat valuable	35.6% (26)
Neutral	8.2% (6)
Not valuable	0% (0)

Data presented to incoming students 91% found this information valuable.

Canvas Study Strategy Resources

Created a module with Peer Recommendations and resources

- Prior to class
- During class
- After each class
- After an examination

Based on Sandra McGuire's work (Teach Students how to Learn) and Bill Cerbin and Stephen Chew's work (i.e. Taking Learning Seriously & Cognitive Challenges to Effective Teaching)

Small Group Exam Wrappers:

Incorporated Inkshedding (Hunt, 2005) Student written reflection round-robin with peers (n = 62).

Prompt: "What study strategies did you use for the 1st exam (or wanted to use) that you feel would be especially helpful for others on future exams." **Feedback**

It was Helpful, Repeat again next year	80.6% (50)
It was Helpful, but Don't repeat this activity	4.8% (3)
It was NOT helpful, but do Repeat next year	14.5% (9)
It was NOT Helpful, Don't repeat this activity	0% (0)

Elevate Lab TAs into Mentors:

Expand the scope and role of lab teaching assistants to include study skill support and apparel.

Lab TA T-Shirt Design



OUTCOMES

Academic Performance:

Assessments were standardized between groups. Overall averages were higher

Average Student Assessment Scores

Assessment	Embedded Assessments	Prior to Initiatives	Following Initiatives
Exam 1	73.39% ± 0.14	76.71% ± 0.14	
Exam 2	81.46% ± 0.13	81.97% ± 0.13	
Exam 3	76.02% ± 0.14	80.05% ± 0.15	
Lab	78.19% ± 0.13	83.07% ± 0.13	
Final	70.89% ± 0.18	72.38% ± 0.17	

Consider if it is better to track all student averages, a random sample or a subset based on a demographic or prior performance

Student Retention:

Only one student (1.3%) withdrew compared with 9% average across sections.

Belongingness Uncertainty:

3-question scored survey developed by Greg Walton & Geoff Cohen (2007).

Uses a 7-point rating scale on three statements:

Average Reported Level of Uncertainty

Belonging Uncertainty	Prior to Initiatives	Following Initiatives
Study Section	10.23 ± 3.09 (n = 82)	10.07 ± 3.04 (n = 63)
Other A&P I	10.08 ± 2.83 (n = 201)	10.42 ± 3.11 (n = 132)
All A&P II	9.54 ± 2.28 (n = 56)	9.78 ± 2.84 (n = 45)
Everyone	9.99 ± 2.97 (n = 339)	10.24 ± 3.03 (n = 240)

Students Reporting Uncertainty of 13 or Higher

Belonging Uncertainty	Prior to Initiatives	Following Initiatives
Study Section	14/82 (20.7%)	11/63 (17.5%)
Other A&P I	40/201 (19.9%)	39/132 (29.5%)
All A&P II	7/56 (12.5%)	9/45 (20%)
Everyone	61/339 (18.0%)	59/240 (24.6%)

QUESTIONS

- Sometimes I feel that I belong at UWL and sometimes I feel that I don't belong.
- When something bad happens, I feel that maybe I don't belong at UWL.
- When something good happens, I feel that I really belong at UWL (reverse-scored).

How might these results differ if the question was about the course, department, major or community?

Open Ended Responses :

Following the survey students were asked to: "Please provide your thoughts on your current sense of belongingness at UWL". Study section responses were coded.

Start of semester - 46

Belong	67%
Community access (friends, clubs, groups)	71%
Have the right to belong (through choice/tuition)	14%
Faculty support	10%
Personality	4%
Belong most or some of the time	20%
Improved with time	33%
More supportive community off campus	17%
Mental struggle	17%
Academically belong, not socially	17%
Belong with friends, not broader community	17%
Do not belong	13%
Lack of community	50%
Student individualism	33%
Transition into school difficult	17%

End of semester - 31

Belong	66%
Community access (friends, clubs, groups)	46%
Faculty support	31%
Have the right to belong (through choice/tuition)	23%
Belong most or some of the time - 4	33%
Worse with time	100%
*Only one student gave written answer	
Do not belong - 6	19%
Disconnect between personal life and school community	60%
Lack of faculty support	20%
Community inaccessible	20%

Learning Environment Survey (LENS):

New UWL student evaluation system asks about peer interactions and belongingness.

