

A Three-Pillar Model Approach to Understanding Student Success

Stephanie McKeown

Director, Planning & Institutional Research (UBCO)

Ian Cull

Associate Vice President, Students (UBCO)

Mary Demarinis

Registrar & Director, Student Services (JIBC)

Scott Emerson

Research Analyst, Planning & Institutional Research (UBCO)



The University of British Columbia



One University – Two Campuses

BRITISH COLUMBIA

ALBERTA

UBC Vancouver
Vancouver B.C.

Vancouver
Island

UBC Okanagan
Kelowna B.C.

Pacific Ocean

Vancouver

Kelowna

Canada-US border

Victoria

Seattle



UBC's Okanagan Campus



What we'll talk about today

- How we developed our model
- What we based it on (our own research)
- Our analytical approach
- What we found
- How we put the results to action

Three-Pillar Model of Student Success

Student Supports
+
Program Affiliation
+
Campus Attachment
=
Student Success



Our Primary Questions

What drives key student behaviours here?

- such as...
 - persistence?
 - high levels of academic achievement?
 - increased student engagement/involvement?
 - positive personal and social development?

Students were from the local region



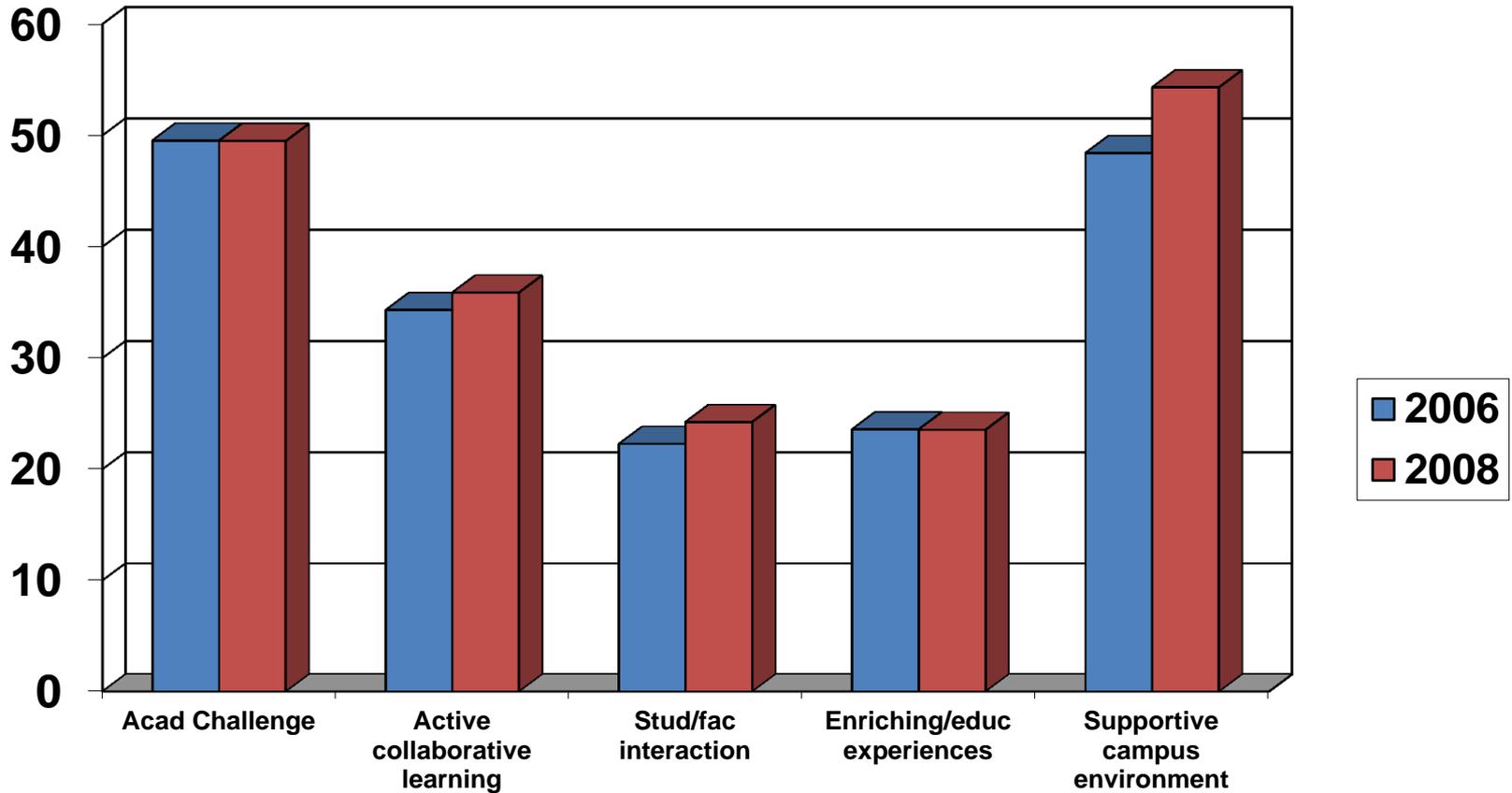
Students felt they belonged



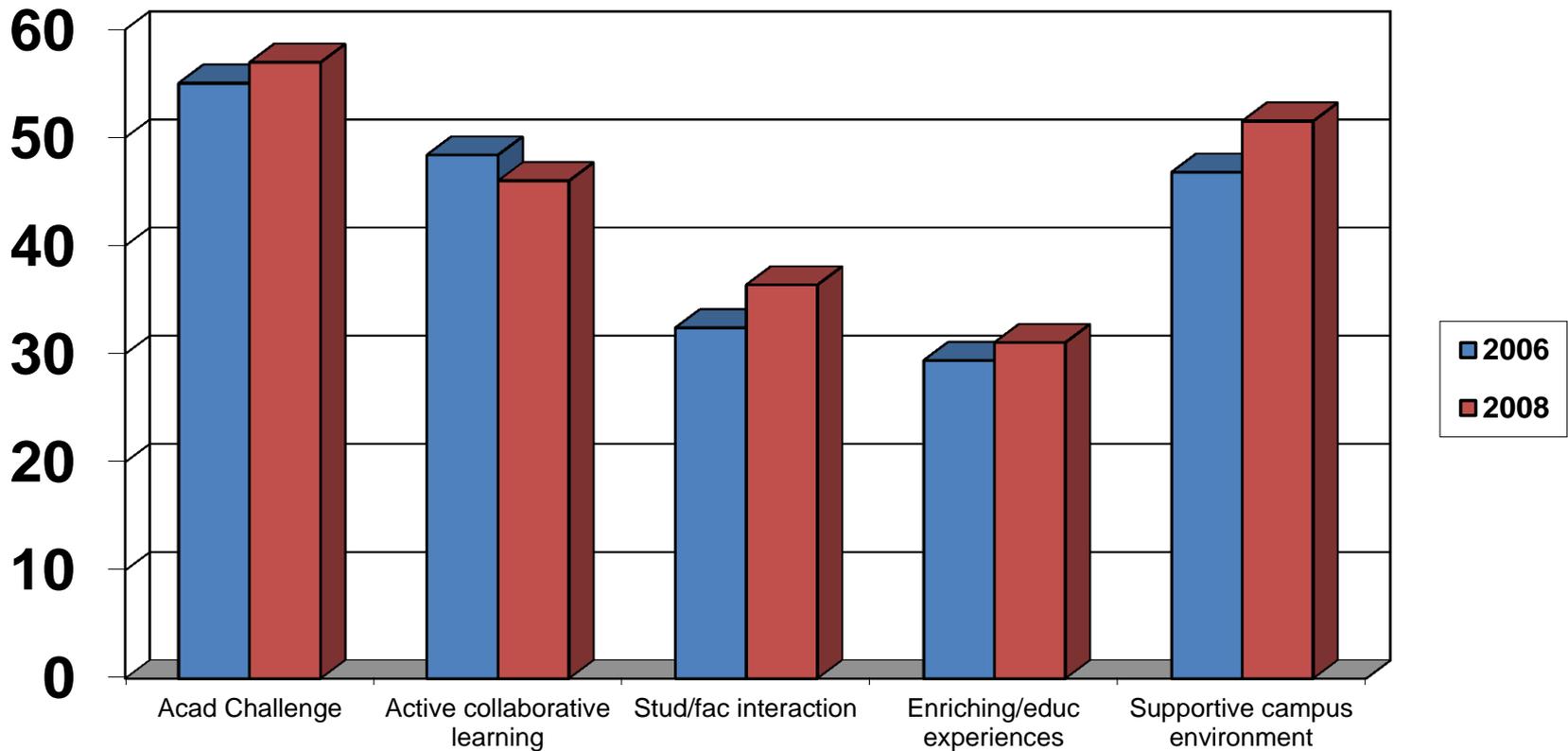
Our campus was their first choice



NSSE Results: First-Year Students



NSSE Results: Fourth-Year Students



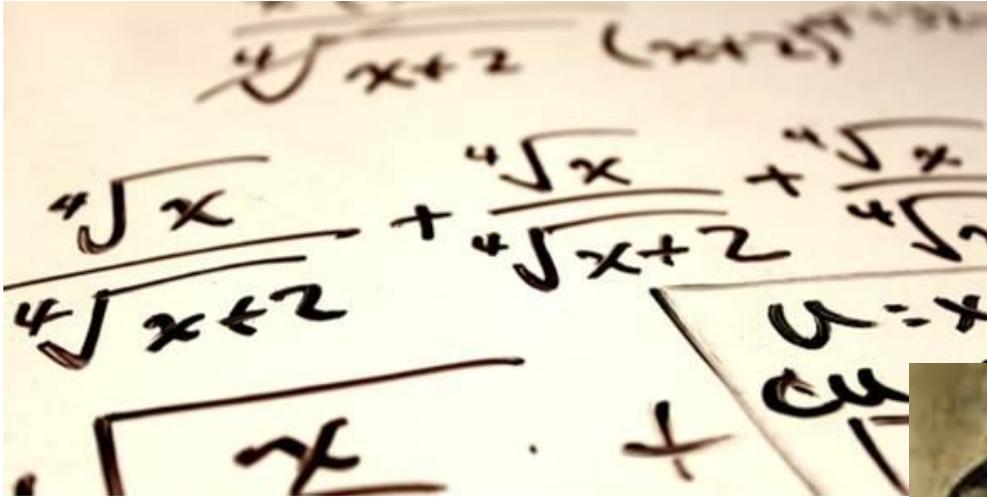
Ongoing Assessment Practices

- In 2009 we implemented a new-to-UBC survey
 - To find out about their expectations for first-year, identify any problems/concerns about transitioning to university, and what types of support they might need
- In the following spring we implemented an Undergraduate Experience Survey adapted from the University of California survey
- All programs in the Students portfolio require a plan for assessment built in to their programs

Student Affairs Programming

- Academic Resource Centre
- Supplemental Learning
- Tailored orientation programs
- Collegia programs
- Career Services

Math and Writing Centre



Supplemental Learning Program



Peer Mentor and Collegia Program



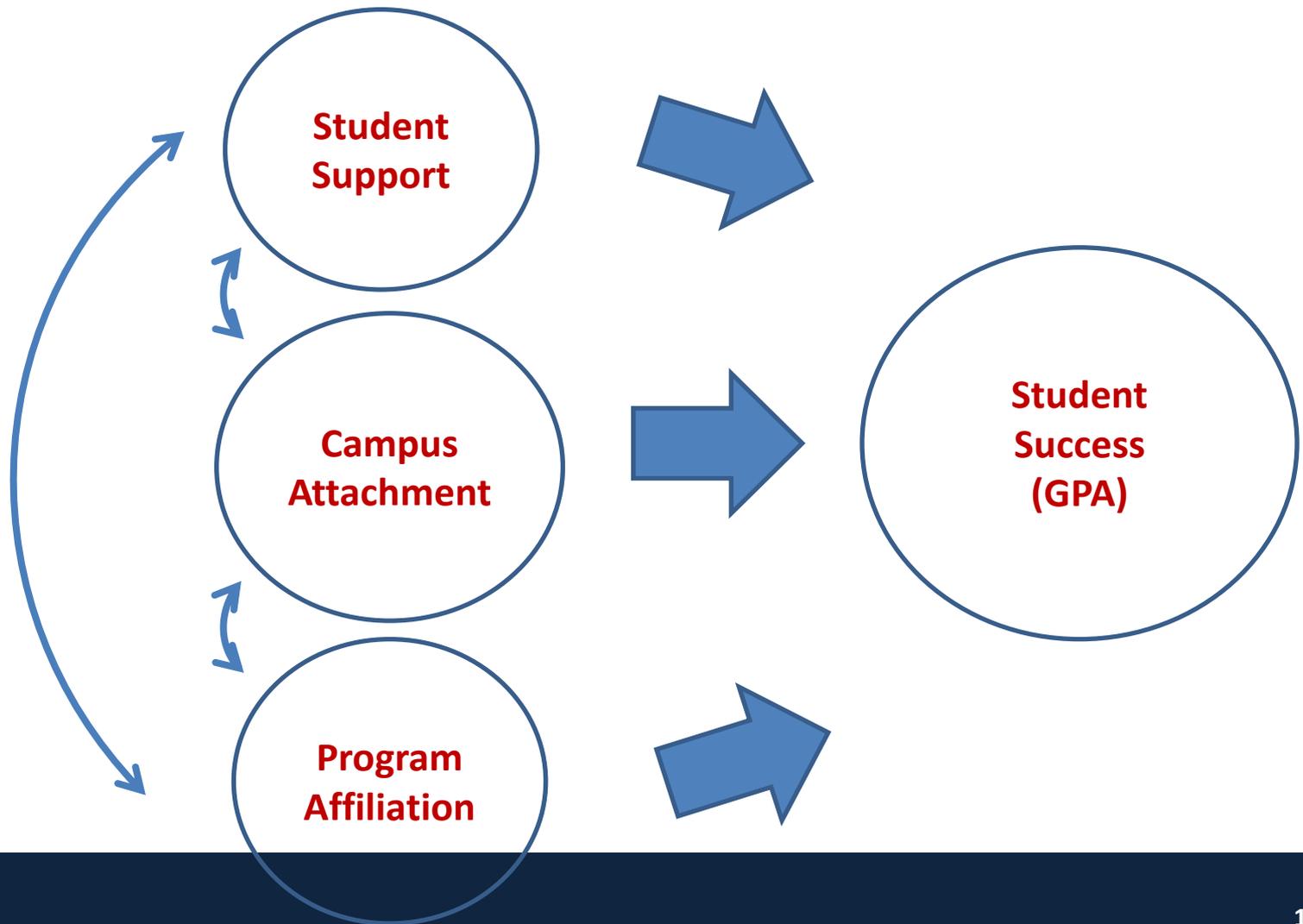
Career Planning

CAREER CENTRE

Think ahead. Go further.



Emergence of the Three-Pillar Model



What did we want to know?

- Is there empirical support for the three-pillar model at our campus?
- What programs and services seem to be related to student academic achievement (sessional GPA), based on survey results?

Study Measure

- Undergraduate Experience Survey (UES)
- Adapted from the SERU/UCUES at the University of California
- Research intensive universities
- Census survey
- Spring 2013

Study Sample

- Included only **domestic** students
- **1,378** student respondents
- Year levels analysed separately (n~300 to 400)
- Overall response rate **34%**

Analytical Approach

- Structural Equation Modeling (SEM)
- Investigate underlying relationships among the three pillars ('unobserved or latent variables')
 - Relationships between institutional contexts and student perspectives
 - (Henseler, 2012; Xu, Villafane & Lewis, 2013)
- **Not a causal model**, but can be used to 'shed light' on how well the data can support previous knowledge and theoretical assumptions

Model Assumptions

- SEM relies on statistical assumptions that must be met to ensure fit between the model and the data (Weston, Gore, Chan & Catalano, 2008)
 - Sample sizes should not exceed 400
 - Regression weights < 0.45 (Comrey & Lee, 1992)
 - Reliability estimates were acceptable at $\alpha \geq 0.60$ (Lowenthal, 1996)
 - Fit statistics RMSEA (> 0.08) and CFI (> 0.90) (Hu & Bentler, 1998)
- **Final year-level models met the requirements**

Overall Results

- The outcome of the analysis suggests each of the three pillars contributed **statistically significantly*** and **positively** to student academic success, measured by sessional GPA, for each year level.

*statistical significant, $p < 0.05$, $p < 0.01$ $p < 0.001$

Results: Student Support Pillar

- Survey questions related to involvement in the following programs seemed to contribute most to understanding this pillar across each year-level:
 - **Supplemental learning sessions**
 - **Supportive learning groups**
 - **Math & Writing Centre (tutoring) programming**

Note: results varied by year level supporting the use of targeted programming

Results: Student Support Pillar

- In addition, involvement of these programs...
- Second year students:
 - **First-year Peer Mentoring**
 - **Supplemental Learning**
 - **Career Centre Programming**
- Fourth year students:
 - **Career Centre Programming**
 - **Collegia**
 - **Campus Recreation activities**

Results: Campus Attachment Pillar

- Across all year levels, campus attachment was described by **overall academic and service satisfaction**, and **pride with being a UBC Okanagan student**
- For 1st and 2nd year students, their perceptions about **student life** and **their campus experiences** helped us understand the relationship with campus attachment

Results: Program Affiliation Pillar

- Program affiliation seemed to be described mostly by survey questions about **student involvement** and **faculty-to-student interaction in the classroom** across all year levels
- Two survey items stood out...
 - **Contributing to class discussions**
 - **Asking insightful questions in class**

Relationships Among the Three Pillars

- Program affiliation related positively to GPA at all year-levels except second years
- Program affiliation was related positively to Campus Attachment for all year levels except third years
- Campus attachment was related positively to GPA
- Third year students who used student support initiatives tended to have slightly higher sessional GPAs than those who did not engage with student support initiatives (coefficient = 0.16*)
- Student support was significantly negatively related to Program Affiliation for 1st year students

Overall Conclusions

- Results suggest that first-year students who participated in support activities tended to have a lower perception of their program affiliation
- This seems to make sense as many of these services are intended to support students who are experiencing academic/social difficulties in their first year
- Subsequent year levels did not seem to experience the same relationship between student supports and program affiliation

Overall Conclusions

- Second year students involved in the first-year peer mentoring program and supplemental learning sessions had statistically significantly higher GPAs than students not involved
- Second year students developed an attachment for our campus not their program, but connection to their program was found for third year students
- The campus attachment pillar was not statistically significantly related to the student support pillar

So What Does This All Mean?

- In first year, students struggle with a variety of transition issues and often experience a drop in academic performance.
- Supports that relate directly to academic success, such as the supplemental learning program, are important for first-year students and, thus, show up in the survey as supportive.

So What Does This All Mean?

- In second year, students are developing their competence in a discipline and still report those services that focus on their academic success as supportive.
- As students develop greater sophistication as learners their needs change and it makes sense that more individualized programs such as career services and the writing centre become more pronounced.

Implications for Student Affairs

- Our model was developed over a decade working in partnership with our institutional research team
- This model has guided our development of more tailored and targeted programs/services that increase student support, program and campus connections, and in turn, foster positive student success at our campus
- It has identified where best to situate enhanced collaborations between student affairs and academic affairs to benefit student learning

THANK YOU!

QUESTIONS/DISCUSSION?

