Fostering Student Success Through Faculty & Institutional Research Collaborations

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Realize. It starts with you.

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Presentation Goals

• Explore possibilities for improving students learning through the bridging of SoTL (faculty) and Assessment (IR&P) research agendas

• Share case example – Business Student First-year experience project (BSFYE)

• Open-discussion: share experiences and/or expectations of planned, ongoing, and past faculty and IR&P collaborations
What is the Scholarship of Teaching and Learning (SoTL)?

• SoTL is “an emerging movement of scholarly thought and action that draws on the reciprocal relationship between teaching and learning at the post-secondary level (Boyer, 1990; SoTL website).

• SoTL includes: “rigorous, systematic, and evidence-based study of student learning in one’s own course; the understanding and improvement of student learning and/or teaching practice as its ultimate goal; commitment to disciplinary and/or interdisciplinary peer-review and appropriate public dissemination; impact beyond a single course, program, or institution – advancing the field of teaching and learning to build collective knowledge and ongoing improvement.” (SoTL website)
Two Distinct Traditions

**SoTL**
- Bottom-up
- Inquiry motivated by classroom experiences
- Reflects faculty members interests and values

**COMMON GROUND**
- Improve student learning outcomes in the classroom, institution and beyond

**Assessment**
- Top-Down
- Inquiry motivated by goals of institutional effectiveness and accountability
- Reflects administrative needs
International Society for the Scholarship of Teaching and Learning, Oct.22-25, 2014, Quebec City, Canada - Session Topics

• KNOWING YOUR STUDENTS: AN APPROACH TO ENCOURAGE PEDAGOGICAL CREATIVITY AND CHANGE

• INVENTING COURSE DESIGN TO DEVELOP REFLECTIVE INQUIRY-DRIVEN STUDENTS DESPITE INCREASING COMPLEXITY, DIVERSITY AND CHALLENGING COHORT CHARACTERISTICS

• CHANGING THE TEACHING WAY: HOW THE RESULTS OF THE MID-TERM TEACHING FEEDBACK BY STUDENTS CAN BE CONSIDERED BY UNIVERSITY MANAGERS?

• EXPLORING THE EFFECTIVENESS OF THREE DIFFERENT COURSE DELIVERY METHODS IN ONLINE AND DISTANCE EDUCATION
Barriers to working collaboratively

- No or insufficient opportunities to interact in a way that promotes discussion of shared goals
- Disinterest, own agendas at the forefront
- Distrust; issues of power & control; misuse or non-use of information
- In some cases relationships viewed as adversarial; this deepens the divide
Why Bother

• SoTL perspective:
  – **Scholars of teaching and learning**, because of their intentional and systematic approach to analyzing, documenting, and sharing learning outcomes, have a unique role to play in this bridge-building process. In essence, they **can serve as mediators or translators of external accountability mandates**, helping both university administrators and faculty members develop a richer, more complex understanding of student learning that not only promotes continuous improvement, but also makes visible to external stakeholders the learning achieved by the institution’s students. (Hutchings et al., 2013)
Case Example of a Faculty-driven Student Research Study

BUSINESS STUDENTS’ FIRST YEAR EXPERIENCE PROJECT
Background

• In 2009 – 10, the Faculty of Business introduced a new elective course, Introduction to Business (BUS100)

• In 2012, BUS100 became a mandatory course for first-year Business students, and continued to be elective for all other students
Purpose

• Faculty teaching the course wanted to gain a better understanding of:
  – The range of diversity characteristics among BUS100 students
  – The impact of student diversity characteristics on students’ outcomes and learning experiences
  – The impact of newly introduced “high-impact” educational practices on students’ learning outcomes and experiences
  – 2nd to 4th year outcomes
Business Students’ First Year Experience (BSFYE) Project

• Three-year study
• Launched in Fall 2012
• Completed first two years of the study
• The study was aimed at all UofR students enrolled in a BUS100 course
• Data was obtained through two student surveys, two course assignments and the university’s Student Information System
Project Team

- **Dr. Wallace Lockhart:** Principle Investigator, BUS100 Instructor
- Bruce Anderson: Centre for Management Development, BUS100 Instructor
- Brian Schumacher: Associate Dean, BUS100 Instructor
- Kate McGovern: Office of Resource Planning, Senior Analyst
- Don Balas: Graduate student, high school teacher, member of Saskatchewan Education Writing Assessment team.
- UofR Student Success Centre
- UofR Centre for Teaching and Learning
Research Design

Demographic & Enrolment
- Gender
- Age
- Citizenship
- Enrolment Status (full/part-time)
- Faculty

Academic Preparedness
- High School Final Average
- Writing Skills

Personal Attributes
- Jung Typology (MBTI)
- Autonomous Learning
- Grit

High Impact Practices
- Optional Seminars
- Flipped Classroom
- Active Learning

Student Academic Outcomes
- Grades (BUS100/TGPA)
- Perceived Value
- University Skills Development
- Business Knowledge Development
Instruments

Week 1
500 word essay

Week 3-5
Survey 1
ALS/Grit/Consent

Week 7
MBTI & class discussion

Week 12/13
Survey 2
Value/Skills/Content

Writing
- Provincial High School Assessment Tool
  - Organization
  - Fluency

Autonomous Learning (ALS)
- Macaskill & Taylor
  - Independence of learning
  - Study habits

Grit
- Duckworth et al.
  - Perseverance of effort
  - Consistency of Interest

MBTI
- HumanMetrics online Jung Typology Test
  - Extrovert/Introvert
  - Sensing/Intuitive
  - Thinking/Feeling
  - Judging/Perceiving

NOTE: Permission was granted for use of these instruments
# Participation

<table>
<thead>
<tr>
<th>Term</th>
<th>BUS 100 Students</th>
<th>Project Participants</th>
<th>Survey 1*</th>
<th>Survey 2**</th>
<th>MBTI</th>
<th>Writing</th>
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<tr>
<td>201230</td>
<td>254</td>
<td>201</td>
<td>60%</td>
<td>67%</td>
<td>38%</td>
<td>56%</td>
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<tr>
<td>201310</td>
<td>247</td>
<td>165</td>
<td>52%</td>
<td>57%</td>
<td>44%</td>
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</tr>
<tr>
<td>201330</td>
<td>342</td>
<td>297</td>
<td>72%</td>
<td>74%</td>
<td>44%</td>
<td>55%</td>
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<tr>
<td>201410</td>
<td>244</td>
<td>211</td>
<td>59%</td>
<td>63%</td>
<td>41%</td>
<td>45%</td>
</tr>
<tr>
<td>201420</td>
<td>39</td>
<td>37</td>
<td>41%</td>
<td>74%</td>
<td>28%</td>
<td></td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>1126</strong></td>
<td><strong>911</strong></td>
<td><strong>61%</strong></td>
<td><strong>67%</strong></td>
<td><strong>41%</strong></td>
<td><strong>47%</strong></td>
</tr>
</tbody>
</table>

*ALS and Grit scales included in Survey 1

**Measures of students’ perceptions of value of various aspects of the course work and their contributions to the development of university learning skills and business knowledge included in Survey 2
## Profile by Term

<table>
<thead>
<tr>
<th></th>
<th>All Terms (n=686)</th>
<th>201230 (n=152)</th>
<th>201310 (n=129)</th>
<th>201330 (n=245)</th>
<th>201410 (n=144)</th>
<th>201420* (n=16)</th>
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<tr>
<td><strong>Gender</strong></td>
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<tr>
<td>Female</td>
<td>53%</td>
<td>51%</td>
<td>53%</td>
<td>54%</td>
<td>52%</td>
<td>56%</td>
</tr>
<tr>
<td>Male</td>
<td>47%</td>
<td>49%</td>
<td>47%</td>
<td>46%</td>
<td>48%</td>
<td>44%</td>
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<td>**Age *</td>
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<td></td>
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<tr>
<td>&lt;20</td>
<td>47%</td>
<td>63%</td>
<td>27%</td>
<td>58%</td>
<td>31%</td>
<td>33%</td>
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<tr>
<td>20-23</td>
<td>36%</td>
<td>32%</td>
<td>54%</td>
<td>25%</td>
<td>43%</td>
<td>20%</td>
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<tr>
<td>&gt;23</td>
<td>17%</td>
<td>6%</td>
<td>19%</td>
<td>16%</td>
<td>26%</td>
<td>47%</td>
</tr>
<tr>
<td>Average Age</td>
<td>21</td>
<td>20</td>
<td>22</td>
<td>21</td>
<td>23</td>
<td>26</td>
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<tr>
<td>**Citizenship *</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Canadian Resident</td>
<td>75%</td>
<td>85%</td>
<td>78%</td>
<td>72%</td>
<td>66%</td>
<td>63%</td>
</tr>
<tr>
<td>Permanent Resident</td>
<td>6%</td>
<td>5%</td>
<td>5%</td>
<td>8%</td>
<td>6%</td>
<td>6%</td>
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<tr>
<td>International Student</td>
<td>19%</td>
<td>10%</td>
<td>17%</td>
<td>20%</td>
<td>28%</td>
<td>31%</td>
</tr>
<tr>
<td>**Enrolment Status *</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Full-time</td>
<td>89%</td>
<td>98%</td>
<td>89%</td>
<td>90%</td>
<td>83%</td>
<td>44%</td>
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<tr>
<td>Part-time</td>
<td>11%</td>
<td>2%</td>
<td>11%</td>
<td>10%</td>
<td>17%</td>
<td>56%</td>
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<tr>
<td>**Faculty *</td>
<td></td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Business</td>
<td>77%</td>
<td>94%</td>
<td>64%</td>
<td>87%</td>
<td>58%</td>
<td>50%</td>
</tr>
<tr>
<td>Arts</td>
<td>10%</td>
<td>3%</td>
<td>18%</td>
<td>3%</td>
<td>20%</td>
<td>13%</td>
</tr>
<tr>
<td>Other</td>
<td>13%</td>
<td>3%</td>
<td>18%</td>
<td>10%</td>
<td>22%</td>
<td>38%</td>
</tr>
</tbody>
</table>

* Denotes statistically significant difference based on first four terms; 201420 excluded due to the small sample size
Diversity Characteristics vs. Student Outcomes

<table>
<thead>
<tr>
<th></th>
<th>BUS100 Grade</th>
<th></th>
<th>Value</th>
<th>U-Skills</th>
<th>B-Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>p</td>
<td>Grp diff*</td>
<td>ADJR²</td>
<td>p</td>
<td>p</td>
</tr>
<tr>
<td>GENDER</td>
<td>0.000</td>
<td>4.7%</td>
<td>0.038</td>
<td>0.037</td>
<td>0.803</td>
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<tr>
<td>AGE</td>
<td>0.256</td>
<td>2.5%</td>
<td>0.004</td>
<td>0.265</td>
<td>0.231</td>
</tr>
<tr>
<td>CITIZENSHIP</td>
<td>0.000</td>
<td>12.4%</td>
<td>0.173</td>
<td>0.003</td>
<td>0.005</td>
</tr>
<tr>
<td>ENROLMENT STATUS (FT-PT)</td>
<td>0.024</td>
<td>3.4%</td>
<td>0.006</td>
<td>0.404</td>
<td>0.501</td>
</tr>
<tr>
<td>FACULTY</td>
<td>0.305</td>
<td>5.3%</td>
<td>0.005</td>
<td>0.580</td>
<td>0.012</td>
</tr>
<tr>
<td>HS FINAL AVERAGE</td>
<td>0.000</td>
<td>10.0%</td>
<td>0.159</td>
<td>0.067</td>
<td>0.230</td>
</tr>
<tr>
<td>WRITING - ORGANIZATION</td>
<td>0.000</td>
<td>10.2%</td>
<td>0.098</td>
<td>0.323</td>
<td>0.163</td>
</tr>
<tr>
<td>WRITING - FLUENCY</td>
<td>0.000</td>
<td>10.2%</td>
<td>0.139</td>
<td>0.175</td>
<td>0.167</td>
</tr>
<tr>
<td>MBTI- EXTROVERT vs. INTROVERT</td>
<td>0.061</td>
<td>2.0%</td>
<td>0.005</td>
<td>0.587</td>
<td>0.543</td>
</tr>
<tr>
<td>MBTI-JUDGING vs. PERCEIVING</td>
<td>0.000</td>
<td>7.4%</td>
<td>0.049</td>
<td>0.110</td>
<td>0.207</td>
</tr>
<tr>
<td>ALS - INDEPENDENCE</td>
<td>0.312</td>
<td>3.7%</td>
<td>0.007</td>
<td>0.092</td>
<td>0.032</td>
</tr>
<tr>
<td>ALS - STUDY HABITS</td>
<td>0.000</td>
<td>10.3%</td>
<td>0.09</td>
<td>0.334</td>
<td>0.124</td>
</tr>
<tr>
<td>GRIT - CONSISTENCY</td>
<td>0.003</td>
<td>5.9%</td>
<td>0.049</td>
<td>0.180</td>
<td>0.012</td>
</tr>
<tr>
<td>GRIT - PERSEVERANCE</td>
<td>0.025</td>
<td>4.4%</td>
<td>0.042</td>
<td>0.016</td>
<td>0.013</td>
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<tr>
<td>SEMINARS</td>
<td>0.000</td>
<td>6.3%</td>
<td>0.04</td>
<td>0.009</td>
<td>0.002</td>
</tr>
</tbody>
</table>
## Student Demographic Diversity

### Key Findings

- Changing student mix
  - International, mature, part-time & non-business students
- Citizenship is the strongest predictor of BUS100 grades (17%)
- International students lag behind domestic students (12% gap)
- Female students outperform male students (5% gap)
- Few differences in student perceptions of learning

### Implications

- **Institution**: recruitment initiatives, intake standards and assessment, student transition and support services
- **Instructors**: course design, instructional practices - *one size does not fit all*
- **Students**: challenges and opportunities of a cross-cultural classroom
## Academic Preparedness

### Key Findings

- Next to citizenship, academic preparedness variables are the strongest predictors of BUS100 grades
- High school grades account for 16% of the variation
- Writing fluency and organization, each account for 14% and 10% of the variation
- No differences in student perceptions of learning

### Implications

- **Institution**: intake standards and assessment; provision of transitions and learning supports
- **Instructors**: early identification of problems and guidance in accessing supports
- **Students**: awareness of probable outcomes
# Personal Learning Attributes

<table>
<thead>
<tr>
<th>Key Findings</th>
<th>Implications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Study Habits (ALS)</strong> – fifth highest predictor of BUS100 grades (9%); group difference of 10%</td>
<td><strong>Institution</strong>: student supports aimed at improving study habits; broader understanding of these attributes</td>
</tr>
<tr>
<td><strong>MBTI – Judging</strong> students outperform <strong>Perceiving</strong> types (diff of 7%)</td>
<td><strong>Instructors</strong>: assessment and intervention (early in term); instructional design; incorporate self-assessments into pedagogy</td>
</tr>
<tr>
<td><strong>Grit</strong> – grittier students perform better, especially based on <strong>consistency of effort</strong> (diff of 6%)</td>
<td><strong>Students</strong>: increased self-awareness</td>
</tr>
<tr>
<td><strong>Few differences in student perceptions of learning</strong></td>
<td></td>
</tr>
</tbody>
</table>
## High Impact (HI) Practices

### Key Findings

- Higher rates of attendance in non-compulsory seminars is associated with better educational outcomes
- Traditional Practices > HI Practices in perceived value and contribution to skills and content development
- Perceived value of HI Practices is comparable across groups

### Implications

- **Institution:** support and rewards for teaching innovation
- **Instructors:** HI practices can be effective, but like any new craft it takes time to master!
- **Students:** more opportunities for deeper learning and retention
Value of Learning Experiences By Category

Student Perceived Value: By Class Experience / Activity

Flipped Class (Pre-Class, PC): We Still Have Work To Do!
Closing the Loop: From Research to Practice & Policy

• Research meets pedagogy
  – Course design now includes: MBTI, ALS, Grit
  – Greater instructor awareness of student diversity and its implications for learning

• Research informs practice and policy
  – Spreading the word
  – Influencing entrenched practices and policies
Resources / Literature

SoTL
- [http://www.stlhe.ca/sotl/what-is-sotl/](http://www.stlhe.ca/sotl/what-is-sotl/)

BSFYE Project
- See full article prepared for EAIR 2014 at: [http://eairaww.websites.xs4all.nl/forum/essen/PDF/1473.pdf](http://eairaww.websites.xs4all.nl/forum/essen/PDF/1473.pdf)
Q&A; What’s happening at other institutions

- Questions
- Open-discussion
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  wallace.lockhart@uregina.ca