Tracking the Fidelity of High Impact Practice (HIPs) Implementation through Data Triangulation

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Presented at the 2018 California Association for Institutional Research (CAIR)
Thursday - November 15th, 2018
Overview

• HIPs at CSUF
• HIPs Implementation
• Data Triangulation
• Important findings
• Discussion
What are High Impact Practices (HIPs)?

HIPs occur when students are actively engaged in the learning process:

• Students involved in HIPs report greater gains in learning and personal development.
• Underrepresented students benefit even more when they participate in these practices.

“Students who talk about substantive matters with faculty and peers, are challenged to perform at high levels, and receive frequent feedback on their performance typically get better grades, are more satisfied with college, and are more likely to persist.”

- George D. Kuh (2007)
Defining HIPs at CSUF

High Impact Practices (HIPs) are transformational learning opportunities inside and outside of the classroom that provide:

- performance expectations at appropriately high levels
- significant student engagement by investment of time and effort
- meaningful and substantive learning interactions with faculty, staff, students, or external entities
- experiences with diversity*, complexity, and change
- frequent and meaningful feedback
- reflective and integrated learning
- experiential learning

*wherein students are exposed to and must contend with people and circumstance that differ from those with which students are familiar (AAC&U Publication “Taking HIPs to the Next Level”, George D. Kuh)
Six HIPs Characteristics

Interactions
Time & Effort
Diversity
Feedback
Reflective Learning
Experiential Learning
Example HIPs Courses

Natural Science and Mathematics
• Math 115 and 125

Communications
• HCOM 102, HCOM 235

Health and Human Services
• HESC 101, CAS301

Humanities and Social Sciences
• English 101, English 301

Education
• EDEL 315

ART
• Art 104, Dance 222, Music 469

Business and Economics
• BUAD 300, BUAD 301, Marketing 353, Management 465A

Engineering and Computer Science
• CS 120, CS 121, EGOP 381, EGME 304, EGME 306, EGEE 280, EGEE 430

Participation from all colleges and all course levels
HIPs Participation at CSUF: Curricular

<table>
<thead>
<tr>
<th></th>
<th>Fall 2015</th>
<th>Spring 2016</th>
<th>Fall 2016</th>
<th>Spring 2017</th>
<th>Fall 2017</th>
<th>Spring 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td># of Colleges</td>
<td>5</td>
<td>8</td>
<td>8</td>
<td>6</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td># of Faculty</td>
<td>22</td>
<td>37</td>
<td>68</td>
<td>52</td>
<td>102</td>
<td>61</td>
</tr>
<tr>
<td># of Classes</td>
<td>35</td>
<td>58</td>
<td>102</td>
<td>90</td>
<td>176</td>
<td>98</td>
</tr>
<tr>
<td># of Students</td>
<td>980</td>
<td>1431</td>
<td>4026</td>
<td>2618</td>
<td>4871</td>
<td>2578</td>
</tr>
</tbody>
</table>
HIPs AY16 & AY17:
Student Participation by Gender

Male
- HIPS: 47%
- CSUF: 43%

Female
- HIPS: 53%
- CSUF: 57%
HIPS AY16 & AY17: Student Participation by Under-Represented Student Status

- **NON-UR**
  - HIPS: 51%
  - CSUF: 56%

- **UR**
  - HIPS: 49%
  - CSUF: 44%
Triangulated Approach to Ensure HIPs Quality

Student Participation

HIPs Characteristics
- Interactions
- Time & Effort
- Diversity
- Feedback
- Reflective Learning
- Experiential Learning

Student Learning & Success

Data sources:
- Faculty report
- App Tracking
- Post-HIP student survey

Data sources:
- App Tracking
- Faculty report

Data sources:
- Pre/Post assignment
- Retention
Learning Gain Assessment

• Assessment across colleges and disciplines
• Unique examples
  – Art vs Computer Science
• Pre/post learning gain
Learning Gain Distributions

AVG Learning Gain: 11.04%

Difference in post-test and pre-test, in percentage points
HIPs Full Tracking

Technology Tools
Data Collection

Learning Management System HIPs Templates

PeopleSoft Tracking and Designation
Tracking Student Experience in HIPs

REAL-TIME STUDENT TRACKING
Customizing HIPs Tracking for Individual Classes
### Faculty Expectations Survey

**Q15.**

[P3] Meaningful and substantive learning interactions with faculty, staff, students or external entities

<table>
<thead>
<tr>
<th>HIP Characteristic Description for Your HIP Course/Program (The same description will appear in iFullerton tracking)</th>
<th>Associated Activities that Students will be Engaged in (The same description will appear in iFullerton tracking)</th>
<th>Estimated Amount of TIME over the Entire Course/Program</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Example:</strong> Instructional or study sessions</td>
<td><strong>Example:</strong> Office Hour</td>
<td><strong>Example:</strong> Office Hour</td>
</tr>
<tr>
<td>1. Conferences With instructors, tutors, and classmates</td>
<td>Teacher conferences</td>
<td>1 hour</td>
</tr>
<tr>
<td>2. Leave This Text Box Blank</td>
<td>Writing center visits</td>
<td>1 hour</td>
</tr>
<tr>
<td>3. Leave This Text Box Blank</td>
<td>Peer reviews sessions</td>
<td>7 hours</td>
</tr>
<tr>
<td>4. Leave This Text Box Blank</td>
<td>Full/small group discussion</td>
<td>30+ hours</td>
</tr>
<tr>
<td>5. Leave This Text Box Blank</td>
<td>Discussion leaders</td>
<td>3 hours</td>
</tr>
<tr>
<td>6. Leave This Text Box Blank</td>
<td>Instructor feedback</td>
<td>6 hours</td>
</tr>
</tbody>
</table>
Real-time Integration in LMS

High Impact Practices Activity Report
Fall 2016 BUAD 300-04 20352

<table>
<thead>
<tr>
<th>CWID</th>
<th>Name</th>
<th>No</th>
<th>Attendance</th>
<th>Time and effort invested by students</th>
<th>Interactions - faculty, staff, peers, etc.</th>
<th>Opportunities to experience diversity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No</td>
<td></td>
<td>Reading/working on assignments</td>
<td>Preparation for presentation</td>
<td>Interactions with faculty in class</td>
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<tr>
<td>Yes</td>
<td>14</td>
<td>22</td>
<td>12</td>
<td>6</td>
<td>10</td>
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<tr>
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<td>20</td>
<td>3</td>
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<tr>
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<td>14</td>
<td>3</td>
<td>10</td>
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<tr>
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<tr>
<td>Yes</td>
<td>15</td>
<td>16</td>
<td>2</td>
<td>0</td>
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<tr>
<td>Yes</td>
<td>13</td>
<td>1</td>
<td>1</td>
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<tr>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>18</td>
<td>18</td>
<td>12</td>
<td>9</td>
<td>9</td>
<td></td>
</tr>
</tbody>
</table>

Student identifier omitted
Overall Tracking Participation by College % (any tracking by sections in AY16 & AY17)

- Natural Sciences & Mathematics (n = 73): 98.0%
- Mihaylo College of Business and Economics (n = 68): 81.5%
- Health and Human Development (n = 55): 80.6%
- Humanities and Social Sciences (n = 122): 78.6%
- College of Education (n = 16): 72.1%
- Communications (n = 79): 62.0%
- College of the Arts (n = 23): 61.4%
- Engineering & Computer Science (n = 60): 46.1%
# of times worked on topic or issue that involved unfamiliar or different perspective (diversity)

- **Fall 2016**: Faculty Expectation Mean = 88, Student App Tracking Mean = 11
- **Spring 2017**: Faculty Expectation Mean = 52, Student App Tracking Mean = 44
- **Fall 2017**: Faculty Expectation Mean = 52, Student App Tracking Mean = 56
- **Spring 2018**: Faculty Expectation Mean = 61, Student App Tracking Mean = 74
# hours spent preparing for course (time)

<table>
<thead>
<tr>
<th></th>
<th>Faculty Expectation Mean</th>
<th>Student App Tracking Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fall 2016</td>
<td>103.92</td>
<td>34.4</td>
</tr>
<tr>
<td>Spring 2017</td>
<td>89.6</td>
<td>36</td>
</tr>
<tr>
<td>Fall 2017</td>
<td>57.7</td>
<td>25.7</td>
</tr>
<tr>
<td>Spring 2018</td>
<td>62.3</td>
<td>23.7</td>
</tr>
</tbody>
</table>
# times worked with real world problems as part of learning new material (experiential)

- Fall 2016: Faculty Expectation Mean 70, Student App Tracking Mean 23
- Spring 2017: Faculty Expectation Mean 44, Student App Tracking Mean 19
- Fall 2017: Faculty Expectation Mean 30, Student App Tracking Mean 23
- Spring 2018: Faculty Expectation Mean 34, Student App Tracking Mean 42
**HIPs Student Experience Survey**

Please answer the following questions based on your experience in this course.

### MEANINGFUL AND SUBSTANTIVE INTERACTIONS WITH INSTRUCTOR(S)

1.2 How much time, over the entirety of the course, have you spent in meaningful interactions (including class sessions) with the instructor(s)?
   - [ ] 0-10 hour
   - [ ] 11-20 hours
   - [ ] 21-30 hours

To what extent do you agree with the following statements:

1.3 I have had adequate opportunities to interact (including class sessions) with the instructor(s).  

1.4 My interactions with the instructor(s) was helpful for my academic or personal growth.
Tableau Dashboards

- Faculty expectations vs survey responses
- Faculty expectations vs tracking data
- Faithfull of implementation
Individualized Course Data & Reports

HIPs Faculty Course Report

Course: MGMT XXX-XX (XXXX)
Instructor: 
Semester: Spring, 2016

OVERVIEW:

This report contains a general overview of the data for your course from the HIPs project. There are seven key characteristics of HIPs. These include interaction with faculty, interaction with peers, feedback from instructor, time spent on the course, engaging in reflection, engaging in diversity, and engaging in experiential learning. In addition, we used the HIPs App to allow the students to track how much time they spent in each of HIPs characteristics. We looked at learning gain, based on the pre-test and post-test data, as well as the demographic characteristics of each of the students, in relation to each of the HIPs characteristics. Lastly, we examined the relationship between learning gain in the course and student retention. The results of this analysis is in this report.

If you have any questions or want to look at the raw data, please do not hesitate to contact the office of Assessment and Educational Effectiveness at assessment@fullerton.edu or 657.278.2593

We appreciate your participation in making this project successful.

ANALYSIS OF HIP IMPLEMENTATION

The following data is taken from the student tracking results and the information provided by faculty at the beginning of the semester (expectations).

What did the tracking results demonstrate regarding each of the HIPs characteristics?

In general, tracking data and faculty expectations are similar, with the exception of diversity and feedback, which are lower than expectations.

<table>
<thead>
<tr>
<th>HIPs Characteristic</th>
<th>Faculty Expectations of HIPs Characteristics (in hours)</th>
<th>Tracking Data from Students Average hours (Std. Deviation) N=30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interaction with Faculty and Peers</td>
<td>15</td>
<td>9.5 (10.6)</td>
</tr>
<tr>
<td>Diversity</td>
<td>15</td>
<td>1.4 (3.4)</td>
</tr>
<tr>
<td>Feedback</td>
<td>15</td>
<td>4.6 (9.0)</td>
</tr>
<tr>
<td>Time</td>
<td>10</td>
<td>18.1 (15.0)</td>
</tr>
<tr>
<td>Reflection</td>
<td>4</td>
<td>1.0 (1.9)</td>
</tr>
<tr>
<td>Experiential</td>
<td>5</td>
<td>2.4 (2.5)</td>
</tr>
</tbody>
</table>
Final Thoughts

• Similarities and differences observed across implementation
• Differences by discipline
• Take away for faculty
References


HIPs Contacts

- Robert Dawson
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