Assessment of Themed Learning Communities:
Sustaining & Improving Our Work

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Presentation Overview

- Brief introduction to the TLCs at IUPUI
- Methodology & Empirical Data
- Personal Interview & Focus Group Results
- Students’ Experiences
- How Assessment Helps Sustain & Improve the TLC Program
Themed Learning Communities (TLCs at IUPUI)

Essential elements of TLCs:

- Cohort of 25 students
- 3 or more linked courses
- Instructional team
- Interdisciplinary theme & connections
- Learning beyond the classroom
2011 TLC Program Offerings
(Complete listing available at: tlc.iupui.edu)

- Liberal Arts (6)
  - A Mind Wide Open?
  - Law & Order: TLC
  - International Studies
- Engineering (4)
  - Nanotechnology: The Science of Small
  - Motorsports
- Science (3)
  - CSI: IUPUI
- Education (3)
  - Social Justice Past & Present
- Nursing (3)
  - So You Think You Want to Be a Nurse
- Business (2)
  - Classroom to Boardroom
- Social Work (1)
  - Smart Helpers for the World!

- Public & Environmental Affairs (2)
  - Dangerous Minds, Dangerous Policies
- Herron School of Art (1)
  - Questioning Vision and the Practice of Seeing
- Physical Education (2)
  - Fit ‘n’ Healthy
- Nursing (3)
  - So You Think You Want to Be a Nurse
- University College (10)
  - For Love AND Money: Defining Success
  - Think About It
  - Athletes: Powerful Learning
  - Follow your Dreams: Exploring Healthcare Careers
The TLCs have grown nearly four fold since beginning in 2003.

Program growth and sustainability is due in part to enrollment monitoring.
- Summer enrollment
- Declared majors
- Previous enrollment trends
Employ Mixed-Method designs using qualitative and quantitative methods.

Attempt to understand how TLCs influence students’ success levels (e.g., retention rates, GPAs).

Administer end-of-course questionnaires (designed to provide information on students’ perceptions of course benefits, learning outcomes, satisfaction levels, why decided to enroll)

Conduct focus groups and individual interviews.

Collect direct measures of student learning (e.g., Integration and Application of Knowledge embedded course assessment as part of the 2012 Reaccreditation efforts)
Mixed-Method Approaches

- Allows researchers to:
  - Triangulate findings from multiple sources.
  - Converge or corroborate findings.
  - Strengthen the internal validity of the studies.
  - Create elaborated understandings of complex constructs such as “engagement” or “integrative learning.”
Learning communities have been advocated as effective interventions for enhancing:

- Student Retention (Tinto, 2003)
- Engagement levels (Yancy, Sutton-Haywood, Hermitte, Dawkins, Rainey, and Parker, 2008; Zhao and Kuh, 2004),
- Student learning and academic success (Hegler, 2004; Henscheild, 2004; Kuh, 2008; Stassen 2003),
- Opportunities for service learning (Oates and Leavitt, 2003),
"When I am asked, what one thing we can do to enhance student engagement and increase student success? I now have an answer: make it possible for every student to participate in at least two high impact activities during his or her undergraduate program, one in the first year, and one taken later in relation to the major field. The obvious choices for incoming students are first-year seminars, learning communities, and service learning”

(George Kuh, 2008)
“While improved retention is a welcome consequence of learning-community work, it has never been its aim. In the push to improve student retention, it is easy to overlook what research tells us: Students persist in their studies if the learning they experience is meaningful, deeply engaging, and relevant to their lives”

(Lardner & Malnarich, 2008)
<table>
<thead>
<tr>
<th>Year</th>
<th>TLC Participants N</th>
<th>Adjusted Retention*</th>
<th>Non-Participants N</th>
<th>Adjusted Retention*</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007</td>
<td>565</td>
<td>76%</td>
<td>1690</td>
<td>67%</td>
</tr>
<tr>
<td>2008</td>
<td>647</td>
<td>72%</td>
<td>1904</td>
<td>74%</td>
</tr>
<tr>
<td>2009</td>
<td>742</td>
<td>74%</td>
<td>1774</td>
<td>76%</td>
</tr>
<tr>
<td>2010</td>
<td>683</td>
<td>78%</td>
<td>1465</td>
<td>73%</td>
</tr>
</tbody>
</table>

Comparison group – students who participated in a freshman seminar or learning community.

*Retention rates adjusted to account for significant variables in the logistic regression model including: course load, gender, ethnicity, SAT scores, and high school GPA.

Bolded items are significant p<.01
## Graduation Rates

### Indianapolis First-Time, Full-Time Cohort Retention TLC Participants vs. Non-Participants

<table>
<thead>
<tr>
<th></th>
<th>Initial Totals</th>
<th>1 year retained</th>
<th>1 year graduated</th>
<th>2 years retained</th>
<th>2 years graduated</th>
<th>3 years retained</th>
<th>3 years graduated</th>
<th>4 years retained</th>
<th>4 years graduated</th>
<th>5 years retained</th>
<th>5 years graduated</th>
<th>6 years retained</th>
<th>6 years graduated</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fall 2003 Cohort</strong></td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TLC Partic</td>
<td>138</td>
<td>75%</td>
<td>0%</td>
<td>64%</td>
<td>0%</td>
<td>59%</td>
<td>1%</td>
<td>54%</td>
<td>19%</td>
<td>51%</td>
<td>40%</td>
<td>49%</td>
<td>42%</td>
</tr>
<tr>
<td>TLC Non-Partic</td>
<td>2017</td>
<td>66%</td>
<td>0%</td>
<td>55%</td>
<td>1%</td>
<td>48%</td>
<td>3%</td>
<td>47%</td>
<td>17%</td>
<td>43%</td>
<td>30%</td>
<td>41%</td>
<td>34%</td>
</tr>
<tr>
<td>Total</td>
<td>2155</td>
<td>67%</td>
<td>0%</td>
<td>56%</td>
<td>1%</td>
<td>49%</td>
<td>3%</td>
<td>47%</td>
<td>17%</td>
<td>44%</td>
<td>31%</td>
<td>42%</td>
<td>34%</td>
</tr>
<tr>
<td><strong>Fall 2004 Cohort</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TLC Partic</td>
<td>253</td>
<td>71%</td>
<td>0%</td>
<td>60%</td>
<td>0%</td>
<td>52%</td>
<td>3%</td>
<td>49%</td>
<td>20%</td>
<td>46%</td>
<td>32%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>TLC Non-Partic</td>
<td>1833</td>
<td>66%</td>
<td>1%</td>
<td>54%</td>
<td>1%</td>
<td>49%</td>
<td>3%</td>
<td>46%</td>
<td>18%</td>
<td>42%</td>
<td>25%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2086</td>
<td>66%</td>
<td>0%</td>
<td>54%</td>
<td>1%</td>
<td>50%</td>
<td>3%</td>
<td>46%</td>
<td>18%</td>
<td>42%</td>
<td>26%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: Graduation figures include bachelor's, associate degrees, and certificates awarded. Retained includes students awarded a degree or certificate or students who have re-enrolled.

Hansen, 2009
# Impact of TLCs on GPA

<table>
<thead>
<tr>
<th>Year</th>
<th>TLC Participants</th>
<th>Non-Participants</th>
<th>Adjusted GPA*</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>N 312</td>
<td>1324</td>
<td>2.75</td>
</tr>
<tr>
<td></td>
<td>Adjusted GPA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>N 535</td>
<td>1499</td>
<td>2.79</td>
</tr>
<tr>
<td></td>
<td>Adjusted GPA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>N 590</td>
<td>1577</td>
<td>2.69</td>
</tr>
<tr>
<td></td>
<td>Adjusted GPA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>N 695</td>
<td>1403</td>
<td>2.89</td>
</tr>
</tbody>
</table>

Comparison group – students who participated in a freshman seminar or learning community.

*G.P.A. adjusted to control for significant covariates including: course load, gender, ethnicity, SAT scores, high school percentile ranks, units of high school math, and first-generation students.

Bolded items are significant $p<.01$
# 2009 Themed Learning Community Impact on First-Year GPA: ANCOVA Results

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Avg. Fall GPA</th>
<th>Avg. Adjusted Fall GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLC</td>
<td>695</td>
<td>2.84</td>
<td>2.87</td>
</tr>
<tr>
<td>Non Participants</td>
<td>1403</td>
<td>2.81</td>
<td>2.79</td>
</tr>
<tr>
<td>Overall</td>
<td>2198</td>
<td>2.82</td>
<td></td>
</tr>
</tbody>
</table>

**Note 1:** Bolded items are significantly different based on ANCOVA Results ($p < .05$). Covariates included the following: H.S. GPA, SAT score, and gender.

**Note 2:** Comparison group includes only students enrolled in First-Year Seminars. Students who were Administratively Withdrawn or Withdrew are excluded.
## 2010 Themed Learning Community Impact on First Year GPA: ANCOVA Results

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Avg. Fall GPA</th>
<th>Avg. Adjusted Fall GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>TLC</td>
<td>683</td>
<td>2.74</td>
<td>2.75</td>
</tr>
<tr>
<td>Non Participants</td>
<td>1465</td>
<td>2.60</td>
<td>2.60</td>
</tr>
<tr>
<td>Overall</td>
<td>2148</td>
<td>2.64</td>
<td></td>
</tr>
</tbody>
</table>

**Note 1:** Bolded items are significantly different based on ANCOVA Results ($p < .001$). Covariates included the following: H.S. GPA, SAT score, and gender.

**Note 2:** Comparison group includes only students enrolled in First-Year Seminars. Students who were Administratively Withdrawn or Withdrew were excluded.
# Hierarchical Regression Results: Program Type and GPA

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unstandardized Beta Weight</th>
<th>SE</th>
<th>Standardized Beta Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.S GPA</td>
<td>.99</td>
<td>.05</td>
<td>.40</td>
</tr>
<tr>
<td>SAT</td>
<td>.00</td>
<td>.00</td>
<td>.13</td>
</tr>
<tr>
<td>FEMALE</td>
<td>.14</td>
<td>.04</td>
<td>.07</td>
</tr>
<tr>
<td>FIRST GEN</td>
<td>-.12</td>
<td>.04</td>
<td>-.06</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H.S GPA</td>
<td>.97</td>
<td>.05</td>
<td>.39**</td>
</tr>
<tr>
<td>SAT</td>
<td>.00</td>
<td>.00</td>
<td>.13**</td>
</tr>
<tr>
<td>FEMALE</td>
<td>.12</td>
<td>.04</td>
<td>.06**</td>
</tr>
<tr>
<td>FIRST GEN</td>
<td>-.12</td>
<td>.04</td>
<td>-.06**</td>
</tr>
<tr>
<td>SB-TLC</td>
<td>.32</td>
<td>.06</td>
<td>.10**</td>
</tr>
<tr>
<td>TLC</td>
<td>.22</td>
<td>.05</td>
<td>.09**</td>
</tr>
<tr>
<td>SB</td>
<td>.14</td>
<td>.08</td>
<td>.04*</td>
</tr>
<tr>
<td>LC</td>
<td>.05</td>
<td>.06</td>
<td>.02</td>
</tr>
<tr>
<td>ONLINE FYS</td>
<td>-.12</td>
<td>.08</td>
<td>-.03</td>
</tr>
<tr>
<td>NO PROGRAM</td>
<td>-.10</td>
<td>.07</td>
<td>-.03</td>
</tr>
</tbody>
</table>

R² = .24 for Step 1; ∆R² = .018 for Step 2 (p < .001). **p < .01, * p < .10
Significant differences between TLC students (144) in comparison to IUPUI non-TLC students (375) and notably different compared to NSSE Peer Institutions group:

**Diversity**
- Included diverse perspectives in class discussions or writing assignments
- Institutional emphasis on encouraging contact among students from different economic, social, and racial or ethnic backgrounds
- Tried to better understand someone else's views by imagining how an issue looks from his or her perspective
- Had serious conversations with students who are very different from you in terms of their religious beliefs, political opinions, or personal values
- Learned something that changed the way you understand an issue or concept

**Interdisciplinary Learning**
- Put together ideas or concepts from different courses
- Worked on a paper or project that required integrating ideas or information from various sources

**Service & Out of Class Learning**
- Worked with classmates outside of class
- Participated in a community-based project
- Community service or volunteer work

**Academic Challenge**
- Worked harder than thought they could to meet an instructor's standards or expectations
- Made class presentations

**Supportive Campus**
- Overall higher quality of relationships with other students
- Overall higher quality of academic advising
- More institutional emphasis on providing the support students need to help them thrive socially
NSSE Benchmarks: TLC Students Higher than IUPUI Students and Peer Institutions

- Active and Collaborative Learning
- Enriching Academic Experiences
Limitations

- A noteworthy limitation of these investigations is that students self-select into TLCs and selection bias may have affected the internal validity of this study. Thus, the ability to make causal inferences based on the information is limited.

- It is possible that the positive effects of TLCs on academic performance are due to the fact that students who decide to enroll may have differed in substantial ways from students who decided not to enroll and these differences (not TLCs) may have caused the positive outcomes.

- Although important variables were treated as covariates in the statistical models, it is difficult to adjust for all possible self-selection factors using traditional statistical techniques and when experimental designs using random assignment are not employed.
73% reported that they were “Satisfied” or “Very Satisfied” with their TLC Experience.

64% reported that they participated in a community service or volunteer activity.

76% reported that they participated in a campus activity or event outside of class.

55% reported that they participated in an activity or event in the Indianapolis community.

61% reported that they understood connections between different disciplines and courses “Much” or “Very Much.”

54% Developed a better understanding of complex real world social problems and issues “Much” or “Very Much.”
Which Course Components Make Significant Impact on Student Satisfaction With Learning Experiences?

- **Integration and Application of Knowledge**
  - Applied what I learned in one course to another course in my learning community
  - Understood connections between different disciplines and course
  - Applied knowledge gained in learning community courses in service to the broader community and social issues

- **Peer Interactions**
  - Discussed ideas from the TLC courses with peers outside of class.
  - Exchanged ideas with student whose views are different from my own.
  - Formed one or more friendships that I will maintain after the semester.

- **Critical Thinking**
  - Became more effective in analyzing and understanding readings in essays, articles, and textbooks
  - Developed a better understanding of complex real world social problems and issues
  - Actively discussed complex issues and ideas
## Self-Reported Benefits of 2010 TLCs

**Rank-Ordered by Mean Value (N=640)**

<table>
<thead>
<tr>
<th>Benefit</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formed one or more friendships that I will maintain after the semester.</td>
<td>640</td>
<td>4.17</td>
<td>1.04</td>
</tr>
<tr>
<td>Exchanged ideas with student whose views are different from my own.</td>
<td>639</td>
<td>3.76</td>
<td>1.02</td>
</tr>
<tr>
<td>Understood connections between different disciplines and courses.</td>
<td>640</td>
<td>3.66</td>
<td>0.93</td>
</tr>
<tr>
<td>Became more effective with communicating my thoughts in writing.</td>
<td>641</td>
<td>3.62</td>
<td>1.03</td>
</tr>
<tr>
<td>Actively discussed complex issues and ideas.</td>
<td>636</td>
<td>3.58</td>
<td>1.03</td>
</tr>
</tbody>
</table>
Student Focus Group Interviews

- Individual and focus group interviews (n = 14) were conducted with a total of (48) students from Fall 2010 – Spring 2011.
- Designed to gather students’ thoughts and perceptions of their TLC experiences.
- Transcribed interview data was uploaded into ATLAS.ti; qualitative data analysis software.
- Two person research team examined data for common themes of discussion.(Strauss & Corbin, 1990)
How do you think your experiences would have been different if you were not enrolled in a TLC during your first semester?
Peer Connections

Linked Cohort of Students
“It made me more social, being in a TLC, because I was just put in a group with people but - we had the same major and same interest...”

More Comfortable and Confident (Less “shy”)
“I wouldn’t be the person I am today, like I was like a shy person in high school...and now I’m able to like explore more things on campus and be involved and get to know and network with a lot more people - because that’s what the TLC did; like it helped.”

Forming Peer Support Network
“And having that same people in each class - I think worked better for us because we were able to go to that person - I need help in this; I need help in that. And just knowing that person was there to help you, I think gave us that extra push.”
Feelings of Being Lost

“I would have been one lost puppy; that’s for sure.”
“I would have been lost...I’m just awful with directions.”
“I feel that I probably would have been lost like my friends.”

Campus Resources (Centers)

“Our TLC also went over a lot of the Oncourse and Onestart system which was really helpful because I totally would not have been able to figure that out.”

“If I wouldn’t have been in a themed learning community ...I would still have so many questions about -- where things are -- and how to use the library and...how to use like the resources that the library has like on the computer and all that stuff.”
“Since we were in our learning community and were here during (Summer) Bridge, before everybody else, we were able to navigate the campus without having a mass of students.”

“And having to be at Bridge at 8:30 in the morning was insane (laugh)... and I was like super tired but then I tried to make everyone smile. And then one day I didn’t come so everybody was like where is (“----“) texting; it was so cute.”

“Going through bridge I remember the first day that like no one wanted to talk to anyone and everyone was just kind of standoffish and stuff... personally I can’t even imagine what that would have been like the first day of classes... I mean we had three weeks together before classes actually started.”
“Radiation therapy and nuclear medicine are very similar - so I thought that would be a good backup plan for me; but it’s kind of now which major do I want? - So I have to do more observations and things to find out which official major I want to do.”

“I don’t really want to do that (communication) and so I was able to switch to journalism right after my first semester... I don’t even know if I would have switched after my first year; I don’t know how long it would have taken me to realize - wait a second this isn’t what I want to do - unless they had said - you know - plan out your next four years and figure out what you’re going to do.”
“What really helped me was the UCOL class because that’s where I had the advisor, the student mentor, and the instructor, and we had the librarian which wasn’t really that involved.”

I definitely wouldn’t have as good a relationship with Dr.(---) which has definitely helped...I have a lot of connections with him through just different programs and scholarship programs like all kinds of stuff

“Mrs. (---) helped me out a lot with academic advising I went to her a lot; instead of just like trying to figure everything out by myself; I just went to her and she like cleared it up right away - answered my questions.”
Some research suggests that students may not fully realize the effects of their first semester experiences such as themed learning communities until much later in their academic careers. Do you agree or disagree with this statement and why?
Preliminary Findings

- Forming Study Groups
- Advisement when registering for classes
- Comfortable to approach professors with questions
- Courage to meet new people
- Online resources
- English class (Research & Citation methods)
Implications for Sustaining the TLCs

- TLC interventions can have positive long term impacts.
- The collective impact of TLC courses may be greater than any one course or intervention.
- Students seem to react positively to TLC interventions that facilitate positive connections, interactions, equip them with skills necessary to effectively adjust to college, and help them make connections between courses.
- TLCs help promote high levels of engagement: Active and Collaborative Learning and Enriching Academic Experiences.
Implications for Improving the TLCs

- TLC faculty have developed pedagogical strategies that foster engagement and positive learning experiences.
- Pedagogical strategies that facilitate Integration and Application of Learning, Peer Interactions, and Critical Thinking skills may be most effective in enhancing students’ overall satisfaction with their learning experiences.
- Programs that are tailored to meet the diverse needs of students are optimal.
- Quantitative and qualitative data suggest that there are major variations between sections in terms of students’ learning experiences, academic success outcomes, and satisfaction levels.
Next Steps in TLC Research

- Continue to develop assessment techniques and methods to investigate impacts of TLC interventions.
- Comprehensive study of integrative learning.
- Focus groups and individual interviews with previous TLC students to enhance understanding of their experiences.
- Continue to develop pedagogical strategies that strengthen the positive effects TLCs.
- Use more methods to assess direct learning outcomes (e.g., examine and discuss student work and integrative assignments).
- Conduct a study to understand the notable variation in student success outcomes (GPAs and Retention rates) and students’ self-reported learning outcomes between sections.