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Making an IMPACT: Transforming academic courses through student-centered teaching

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Making an IMPACT

Transforming Academic Courses through
Student-centered Teaching

Clarence Maybee, PhD

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PURDUE LIBRARIES
UNIVERSITY

Student Success in Foundational Courses

- Course completion (lower DFW rates)
- Grade increases
- Student satisfaction

Innovative Educational Ideas

**motivation constructivist informed learning experiential case-based
variation theory problem-based backwards design writing intensive
science literacy makers space connectivist service learning flipped
digital literacy study abroad peer-led team-based ADDIE Kolb-cycle
quantitative literacy MOOC supplemental decision-making active
learning blended learning critical thinking wearable technology self-
determination theory personalized learning threshold concepts inquiry-
guided adaptive learning technology transformative undergraduate
research BYOD double-loop learning storytelling transformative online**



STUDENT-CENTERED LEARNING

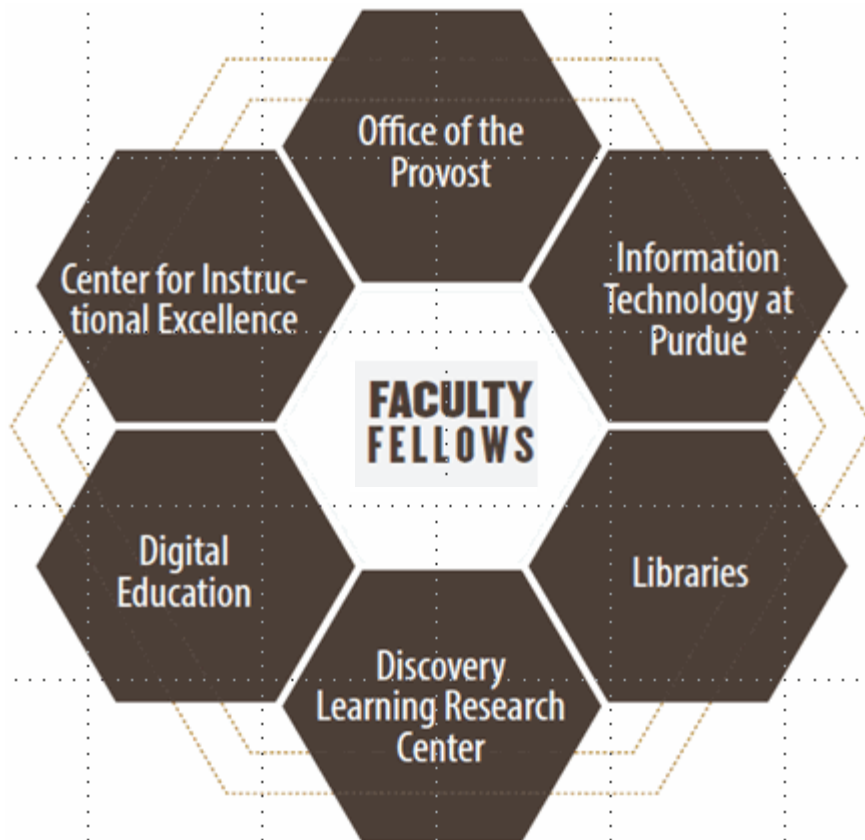


- Course development program
 - Instructional design
 - Learning theories
 - Pedagogic techniques

Redesign foundational courses by using research findings to create student-centered teaching and learning environments.

MISSION

The Partnership



Financial Support:

Provost's Office, President's Office.

Support Staff Contribution:

CIE, Libraries, and ITaP.

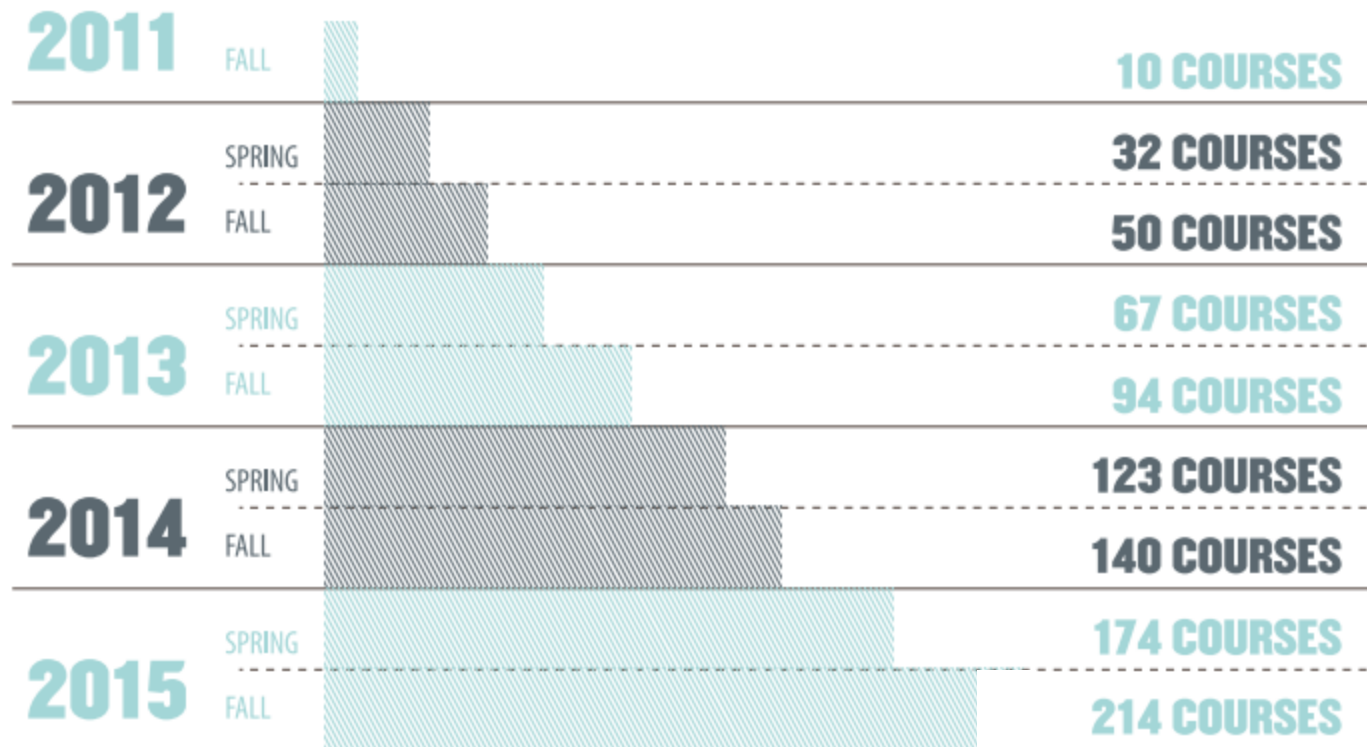
Program Assessment:

CIE, DLRC, and OIRAE

Scholarship of Teaching and Learning:

DLRC, CIE, Libraries, and ITaP.

5 Years of IMPACT



One Year of IMPACT

Spring 2015		Summer 2015 (Polytechnic)	Fall 2016	
AD 125	EDST 200	AT 362	AMST 101	GS 100
AD 225	ENGL 106	BCM 175	AT 144	HIST 103
AGEC 203	ENTM 210	CGT 101	BCM 457	IT 450
ANTH 205	HTM 499	CGT 118	CE 222	ME 323
CGT 226	MA New	CGT 141	CE 474	MET 144
CHE 435	MA 13X00	CNIT 176	CHM 370	NUR 218
COM 100	MA 16020	CNIT 180	CSR 300	NUR 220
COM 114	MCMP 204	ECET 120	CSR 404/590	NUPH 494
COM 204	MET 162	MET 111	EAPS327	OLS 346
ECET 224	MET 245	TLI 111	ECE 305	POL 101
ECET 229	PHIL 230		ENGR 132	WGSS 280
ECET 380	PHY 272		FNR 488	

One Year of IMPACT

Spring 2015		Summer 2015 (Polytechnic)	Fall 2015	
AD 125	EDST 200	AT 362	AMST 101	GS 100
AD 225	ENGL 106	BCM 175	AT 144	HIST 103
AGEC 203	ENTM 210	CGT 101	BCM 457	IT 450
ANTH 205	HTM 499	CGT 118	CE 222	ME 323
CGT 226	MA New	CGT 141	CE 474	MET 144
CHE 435	MA 13X00	CNIT 176	CHM 370	NUR 218
COM 100	MA 16020	CNIT 180	CSR 300	NUR 220
COM 114	MCMP 204	ECET 120	CSR 404/590	NUPH 494
COM 204	MET 162	MET 111	EAPS 327	OLS 346
ECET 224	MET 245	TLI 111	ECE 305	POL 101
ECET 229	PHIL 230		ENGR 132	WGSS 280
ECET 380	PHY 272		FNR 488	



FACULTY LEARNING COMMUNITY

Teams

Faculty Fellows



Jenny Bay
First-year Composition
3000 Students



Neal Widmer
Concurrent Digital Systems
60 Students



Linda Mason
Intro to Insect Behavior
35 Students



Clarence Maybee
University Libraries



Amy Haston
Information Technology at Purdue



Karen Neubauer
Center for Instructional Excellence



Michael Flierl
University Libraries

13-week Curriculum



**MOTIVATING
LEARNERS**



**LEARNING
OUTCOMES**



ASSESSMENT



**LEARNING
ACTIVITIES**

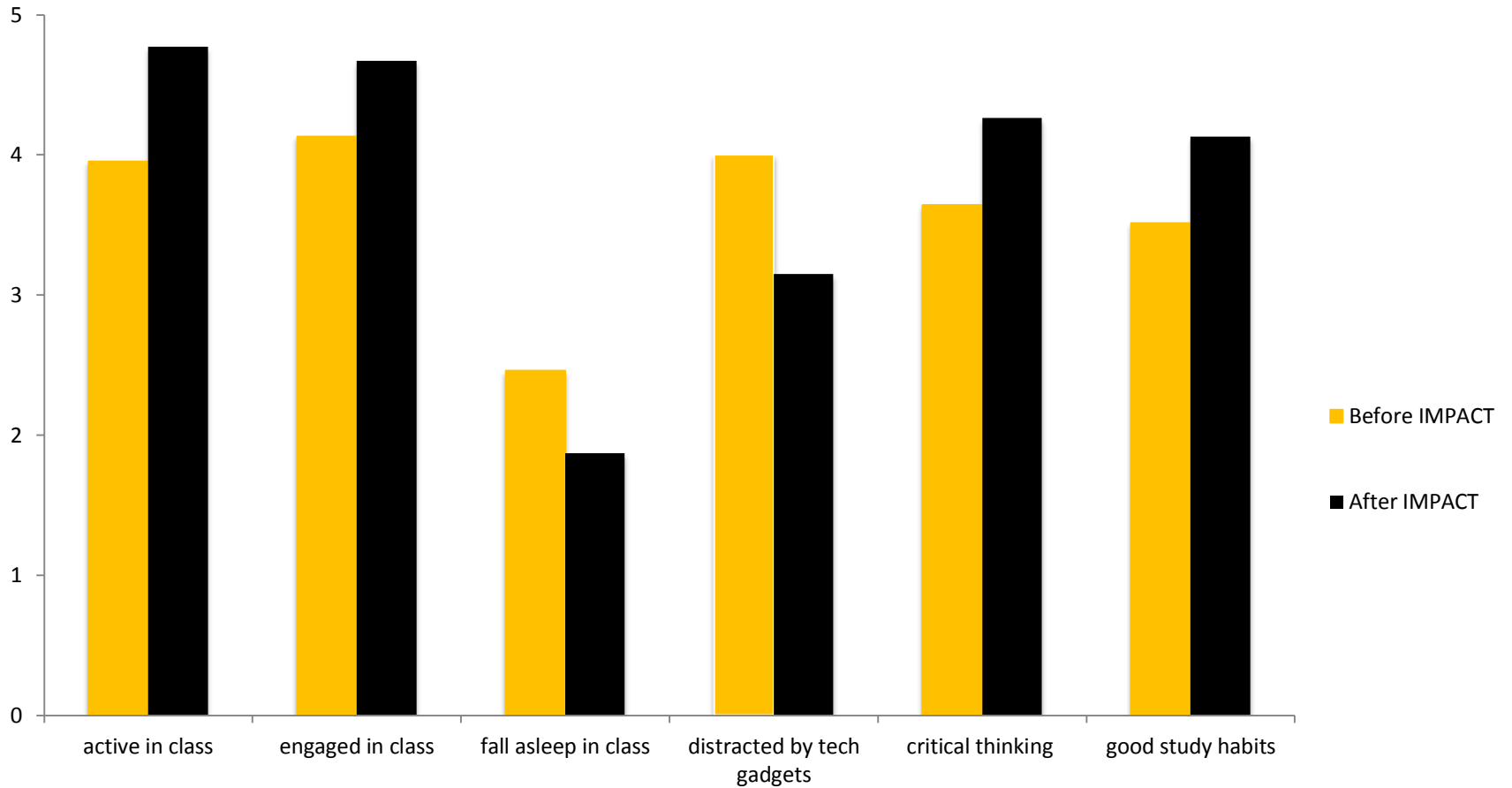


**DRAWING IT
TOGETHER**

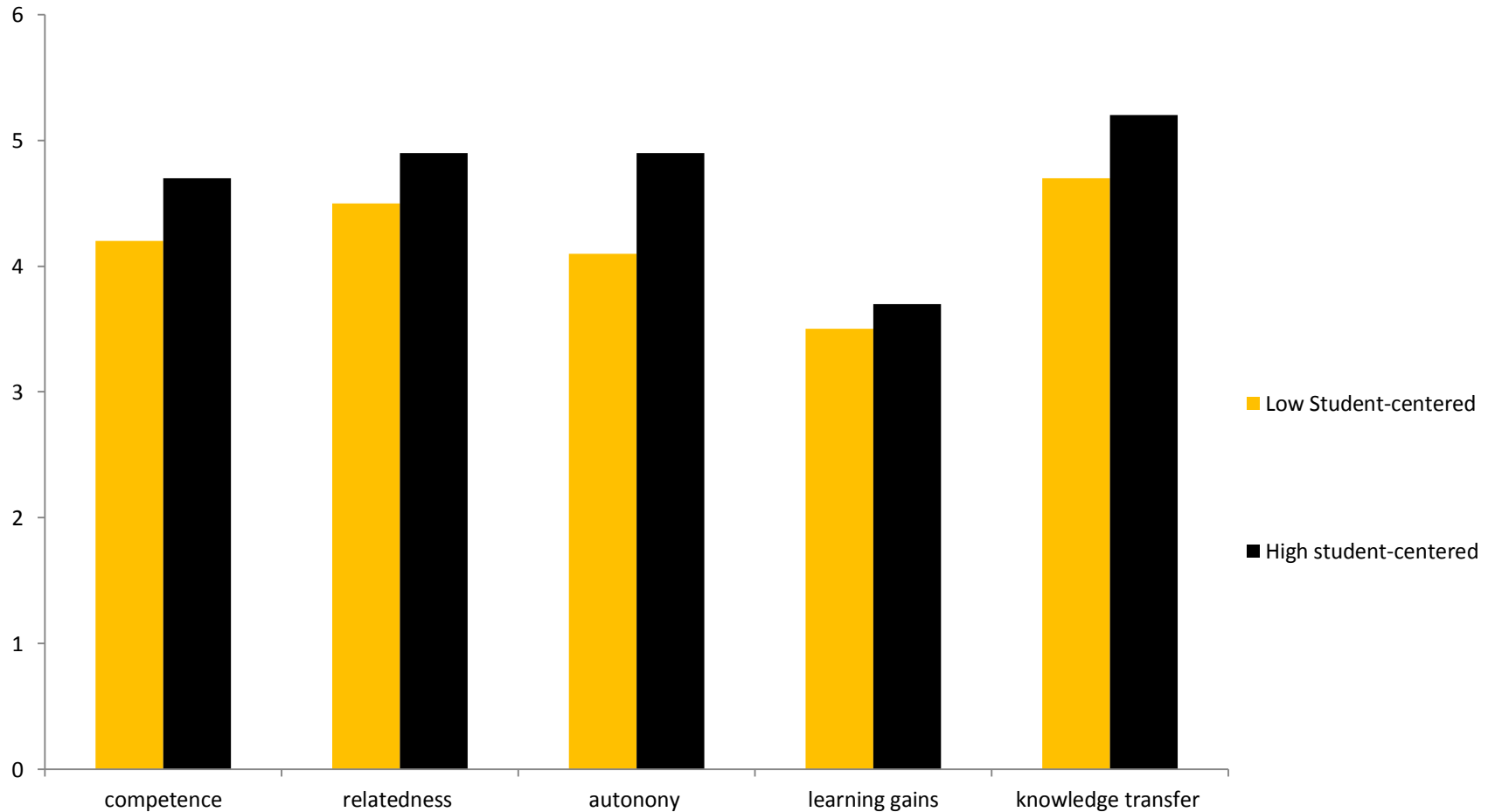
Educational Theories

- **Self-determination theory** (Ryan & Deci, 2000)
 - competency relatedness autonomy
- **Informed learning** (Bruce, 2008)
 - meaningful learning through engagement with information

Faculty Perceptions

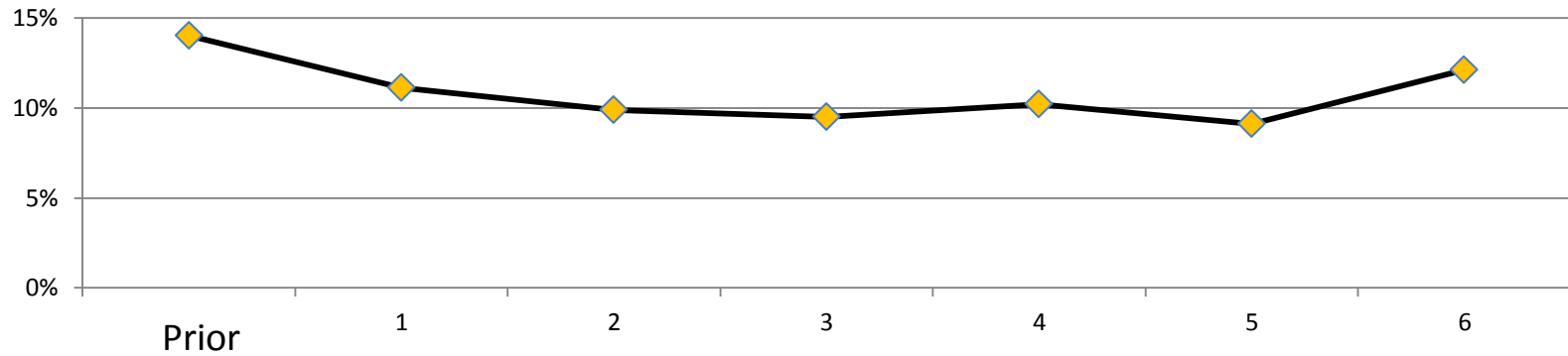


Students Perceptions

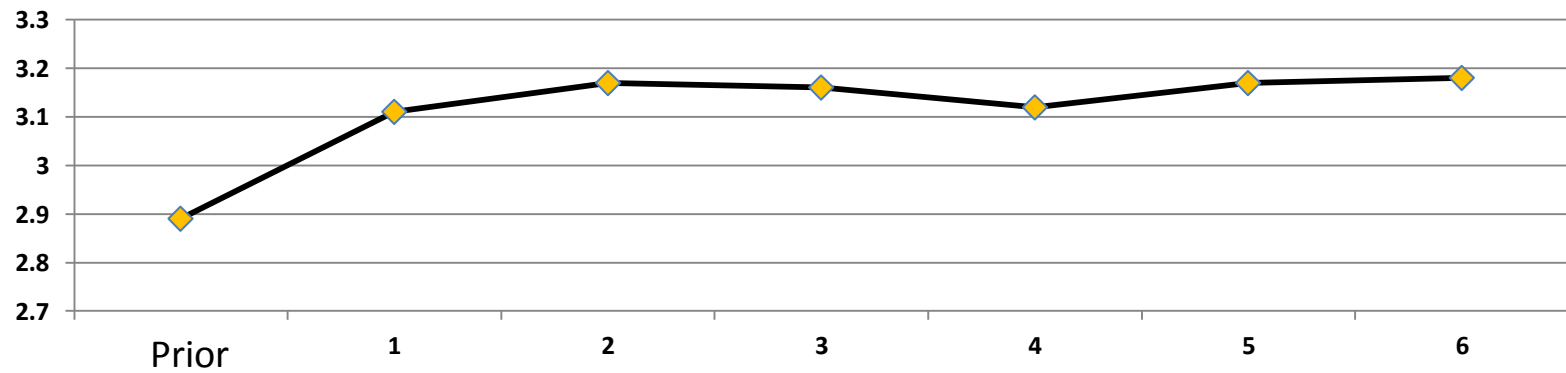


Student Success

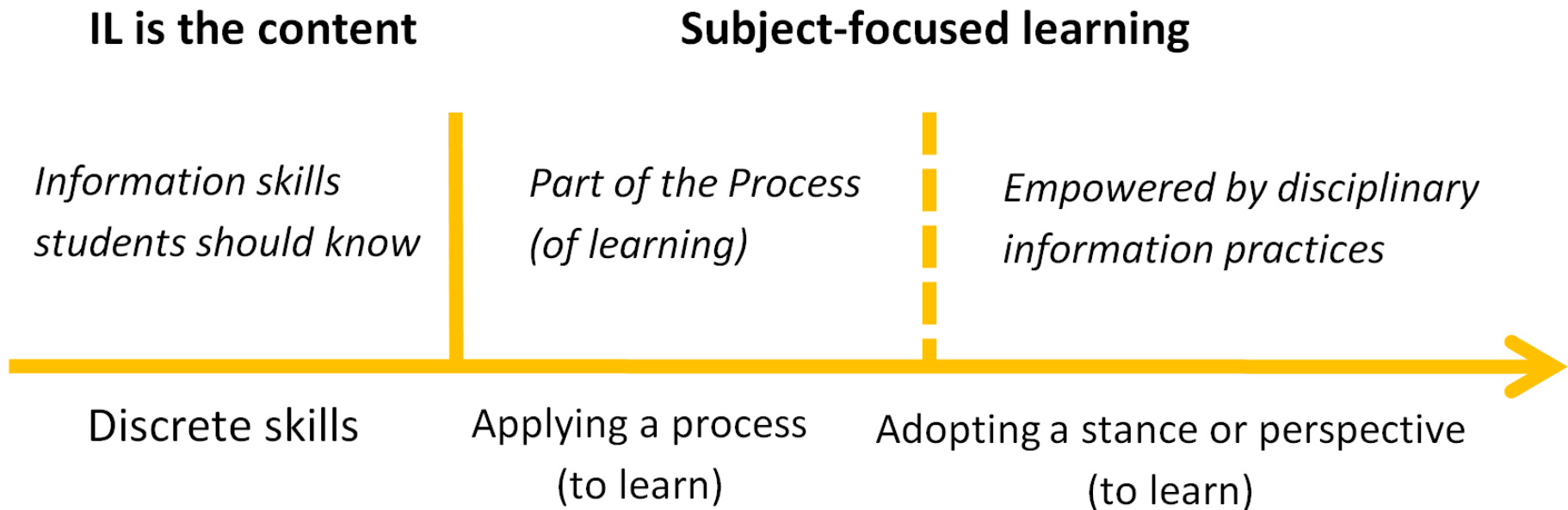
DFW Rate



Final Grade



Active Learning & Information Literacy



Support for Curricula

- Math (sequential courses)
- Purdue Polytechnic Institute
- Industrial Engineering

Buy-In

- Instructor barriers
 - Workload
 - Skepticism of active learning
- Departmental barriers
 - Less value on teaching
 - Faculty autonomy

Departmental Cultures

- Units facilitating IMPACT (ITaP, CIE & Libraries)
 - Individual unit goals
 - Organizational approaches
- Disciplinary perspectives
 - Preferred pedagogic tools

Other Outcomes

- Teaching opportunities
- Scholarship of teaching & learning (SoTL)
- Libraries faculty development
- New educational tools

Wilmeth Active Learning Center



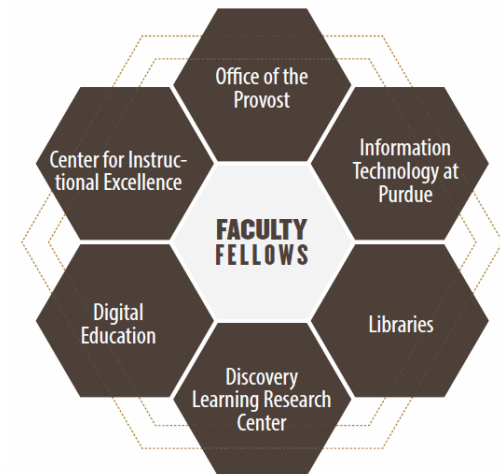
Blending theories

- Consulting model for faculty/librarians partnerships (Flierl, Maybee, Riehle, & Johnson, forthcoming)
- Motivating informed learning activities (Maybee & Flierl, forthcoming)
- Informed learning design

Conclusion

- Focusing on student-centered learning and classroom solutions advances various educational interests

- Student success
- Innovative pedagogies
- Information technology
- Informed leadership



Questions & Comments



References

Bruce, C. S. (2008). *Informed Learning*. Chicago, IL: American Library Association.

Flierl, M., Maybee, C. Riehle, C. F. & Johnson, N. (forthcoming). IMPACT lessons: Strategically embedding MIL through teacher development in higher education. In D. Oberg and S. Ingvaldsen (Eds.). *Media and Information Literacy in Higher Education: Educating the Educators*. Oxford: Chandos.

Maybee, C. Doan. T., & Flierl, M. (2016). Information literacy in the active learning classroom. Manuscript submitted for publication.

Maybee, C. & Flierl, M. (forthcoming). Motivating learners through information literacy. Paper presented at the European Conference on Information Literacy held on October 10-13, 2016 in Prague, Czech Republic.

Ryan, R. M & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25, 54-67.

Links to Additional Information

[IMPACT website](#)

[2015 IMPACT Annual Report, Part I & 2](#)

[2015 IMPACT Annual Report, Part 3](#)