Program Review and Assessment Committee

Thursday, April 13, 2023

1:30 – 3:00pm

Meeting Minutes and Video Recording

Attendees: Alfrey, Karen; Altenburger, Peter; Bassett, Kristin; Bozeman, Leslie; Brehl, Nicholas; Daday, Jerry; Davis, Julie; Easterling, Lauren; Garcia, Silvia; Graunke, Steve; Hahn, Tom; Hassell, John; Helling, William; Houser, Linda; Hundley, Stephen; Keith, Caleb; Kondrat, David; Lee, Jennifer; Lowe, Sara; Lupton, Suzann; Macy, Katharine; Montalbano, Lori; Morris, Pamela; Ninon, Sonia; Rao, Anusha S.; Rausch, Jamie; Rust, Matthew; Sheeler, Kristy; Sosa, Teresa; Wang, Suosheng; Weeden, Scott; Williams, Jane; Zheng, Lin

1. Welcome, review, and approve March 2023 meeting minutes (5 minutes) – Jerry Daday, PRAC Chair

Jerry Daday welcomed everyone to the meeting. The minutes of the March 9, 2023 minutes were approved unanimously.

2. General Education Review at IUPUI (45 minutes) – Sara Lowe, Associate Dean for Educational Services, University Library and Karen Alfrey, Associate Dean for Undergraduate Academic Affairs & Programs, E&T; Co-chairs, Undergraduate Affairs Committee (UAC) - General Education Subcommittee

Karen Alfrey and Sara Lowe provided the following overview on the General Education (Gen Ed) Core at IUPUI. The Gen Ed Core comes from a legislative mandate from the State of Indiana to create a 30-hour transferrable Gen Ed Core at each public institution in Indiana. It is required for first-year students who started in the fall of 2013 or later. Courses in the Gen Ed Core are reviewed on a 5-year cycle at IUPUI.

The IUPUI domains include the following state-mandated domains and added a cultural understanding domain:
- Core communication; analytical reasoning, arts/humanities; life/physical sciences; social sciences (statewide)
- Cultural understanding (IUPUI specific; draws on competencies from arts/humanities and social sciences domains)

IUPUI focuses on foundational courses with no prerequisites as a way of speaking to the "transferrable" piece that was mandated by the State legislature.

The dossier preparation includes four steps:
- Prepared by an instructor, course coordinator, or other designee with knowledge of the course and access to course and assessment materials
- Dossier preparation workshops hosted by the Center for Teaching and Learning (CTL)
- Additional materials available on the CTL website

- Courses with an identified Mile Marker assignment linked to Gen Ed outcomes and Profiles are reviewed with a Mile Marker rubric

Committee Review
- Each dossier is reviewed by two subcommittee members using the relevant rubric (with Mile Marker or without Mile Marker)
- Each reviewer makes an initial recommendation on the reviewed course (reapprove; reapprove with notes; revise and resubmit; and probation)
- After initial review and before presenting findings to UAC, reviewers meet as a group to discuss findings and clarify decisions on borderline cases
- Committee report and recommendations on each group of courses are brought to UAC for discussion and vote
- Final decisions and recommendations are sent to dossier preparers and the UAC representative from their school

Common Reasons for Revise and Resubmit
- Syllabus lacks language to indicate the course is a Gen Ed course and how it supports relevant domain outcomes
- Poor linkage between assignments/student work samples and Gen Ed outcomes, or lack of analysis to show extent of outcomes attainment
- High DFW rates but no analysis or discussion of attempts made to address them

How can PRAC help?
- Volunteer as a Gen Ed reviewer
- Input on the purpose of Gen Ed assessment, and how to best thread the needle on addressing multiple needs (compliance with developing state-mandated competencies, assessment of Profiles) without further overburdening course coordinators
- Serve as a resource on learning outcomes assessment to colleagues preparing dossiers
- Workshop or community of practice specifically on incorporating meaningful outcomes assessment into Gen Ed courses (once we have more clarity on item #2)

Do we know what other universities do?
Other universities follow a 3-year cycle. We initially used the 5-year cycle initially because we were 5 years out from our HLC reaffirmation of accreditation. We wanted to be able to say we had reviewed everything by the time that happened. This gives us a chance to do two full cycles of reviews within the 10-year HLC cycle. We have introduced an expedited process for folks who have gone through the first review with a recommendation to reapprove.

3. Update on Reaffirmation of Reaccreditation with Higher Learning Commission (HLC) (10 minutes) – Stephen Hundley, Senior Advisor to the Chancellor, and Caleb Keith, Director of Planning and Institutional Improvement

Stephen Hundley asked if he could change the order of the next two agenda items. He would like to talk about the reaffirmation of reaccreditation with HLC first and then cover the meta-trends in assessment.

The reaffirmation of reaccreditation with HLC was done here this academic year. This is our 10-year reaffirmation of reaccreditation. It is important for us for a variety of reasons. It is important on the one hand for quality assurance—to demonstrate to our students, to our multiple publics including employers, community members, parents, policymakers, and all of us that we have a set of quality activities, and we live out our mission. We just heard an example of how we go about doing that through the General Education Review process. There is also a business case—to be able to do business with the Federal Government.

Every year, there are activities going on with our institutional accreditors and many of you have disciplinary or specialized accreditors that are really focused to make sure we meet the quality assurance, and we are accountable.

We had a 10-member writing team who prepared a 32,000-word assurance document (or self-study). The assurance document is accompanied by an evidence file. We hosted our review team over two long days in November 2022. The good news is we are reaffirmed for another 10 years. Members of the review team were highly praising of our culture of evidence that is reliant on assessment and improvement. They were pleased with us talking about important elements of our mission around student success, DEI, community engagement, the work we do to support educational attainment and economic development, and other important outcomes.
They were impressed with groups like PRAC, the Undergraduate Affairs Committee, the Graduate Affairs Committee. They were impressed many people across campus could describe in general principles how our budgeting model, responsibility center management, works.

They would like a more formal campus policy on differentiating undergraduate and graduate learning outcomes. The other thing is related to Vision 2024: don't lose sight of what makes IUPUI such a special place in the work you are doing.

Caleb Keith added they were also impressed with the dedication of faculty and staff.

Lori Montalbano: what do we do about updating things after 2024? What are the requirements?
Stephen Hundley: It is business as usual for now. Margie Ferguson is in contact with the campus leadership and HLC. Stay tuned!

Finally, members of the HLC review team praised us for the Assessment Institute. Many of them have attended that conference in the past.

4. Meta-Trends in Assessment (25 minutes) – Stephen Hundley, Senior Advisor to the Chancellor, and Caleb Keith, Director of Institutional Improvement Planning and Institutional

Stephen Hundley and Caleb Keith shared a preview of the meta-trends of the second edition of the book titled *Trends in Assessment: Ideas, Opportunities, and Issues for Higher Education*. It is a periodic volume encapsulating enduring and emerging trends in teaching, learning, assessment, and improvement. The second edition is forthcoming in October 2023

and will feature 51 contributors, many of whom serve as organizers and partners of the Assessment Institute in Indianapolis.

Stephen Hundley asked PRAC members to take 30-45 seconds to reflect on a couple of assessment trends they have noticed or experienced over the past 3-4 years using their own context as a point of reference and report those trends in the Chat feature. PRAC members reported a focus on DEI, culturally-responsive assessment, equitable assessment, assessment of high-impact practices, focus on authentic assessment for student learning, and involving students in the assessment process.

Caleb Keith went through the following list of 10 meta-trends in assessment.
- Appreciate the role assessment contributes to understanding and improving the higher education ecosystem
- Foster opportunities to intentionally integrate diversity, equity, and inclusion in our work
- Focus on quality and fidelity in designing and implementing learning experiences
- Use inclusive sources and credible evidence in assessing learning (e.g., comprehensive learner record and ePortfolios)
- Support the holistic development of students, including their personal, academic, and professional needs and identities
- Collaborate with students—as learning partners—to advance student learning and success
- Engage stakeholders throughout the learning enterprise, including in curricular, cocurricular, community, and experiential settings
- Build capacity for assessment through professional development, rewards, and recognition
- Promote institutional cultures to sustain, scale, and improve learning interventions
- Recognize that assessment remains a work-in-progress, reliant on individual and collective efforts to achieve its potential

Promoting inclusive instructional contexts for students
- Creating a campus culture and climate that fosters student belongingness
- Developing interventions to support the holistic needs of learners
- Designing courses and learning experiences to intentionally include student voices, perspectives, and lived experiences
- Employing assignments and other forms of assessment to provide agency for students in their learning
- Engaging students and other stakeholders in processes related to their teaching/learning and assessment/improvement
- Identifying and addressing equity gaps in instructional contexts

How well are we doing this work?
Stephen Hundley asked PRAC members to use their own context as a point of reference and take 1-2 minutes to reflect on how they promote inclusive instructional contexts for students. PRAC members were invited to register their thoughts in the Chat feature.

Pamela Morris: would like to encourage faculty to allow students multiple ways to demonstrate their learning (written papers, or video or audio recordings) and ask students to help design an assignment (what ideas do they have? What do they hope to get out of the assignment?)

Lori Montalbano: looking at the canon and what kind of content is privileged in the classroom. There is a lot of work to be done in that area. Looking at different voices, perspectives, and experiences.

Leslie Bozeman: wanted to call out some of the work we are doing with virtual global learning. It is a great effort to include students, create belongingness, and address equity.

5. Announcements and Adjournment (5 minutes) – Jerry Daday

Sonia Ninon asked if there were any announcements. Hearing none, the meeting was adjourned at 2:57 p.m. The next PRAC meeting is scheduled for Thursday, May 11.

Undergraduate Affairs + PRAC

General Education Review at IUPUI

Sara Lowe, Associate Dean for Educational Services, University Library
Karen Alfrey, Associate Dean for Undergraduate Academic Affairs & Programs, E&T
Co-chairs, UAC General Education Subcommittee

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SECTION 1

Background and Current Process

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IUPUI General Education Core: History

1. Legislative Mandate

   – 30 crh transferrable Gen Ed core at each public institution in IN

   – Established required domains and associated outcomes, with some freedom of implementation at each institution

2. Required for entering students beginning Fall 2013 or later

3. Courses in the Core reviewed on a 5-year cycle

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IUPUI Gen Ed Implementation

1. IUPUI domains

   – Core Communication, Analytical Reasoning, Arts/Humanities, Life/Physical Sciences, Social Sciences (statewide)

   – Cultural Understanding (IUPUI-specific; draws on competencies from A/H and SS domains)

2. IUPUI focus on foundational courses with no prerequisites ("transferrable")

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Adding Courses to the Gen Ed Core

1. Open application when core was first established

2. Moratorium over the last several years

    – Keep the Core at a "manageable" size

    – Encourage high-impact practices, interdisciplinary course, and other innovative offerings when moratorium is temporarily lifted

    – Occasionally consider special cases

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SECTION 2

IUPUI General Education Review Process

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IUPUI Gen Ed Review: Dossier Preparation

1. Prepared by instructor, course coordinator, or other designee with knowledge of the course and access to course and assessment materials

2. Dossier preparation workshops [hosted by the Center for Teaching and Learning](#)

3. [Additional materials](#)available on the CTL website

4. Courses with an identified Mile Marker assignment linked to Gen Ed outcomes and Profiles are reviewed with a Mile Marker rubric

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DFW Analysis

1. Data to be provided, including DFW by demographics

2. Analysis of reasons for high DFW rates and description of any actions taken to address them

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Mile Marker Assignments

1. What is a Mile Marker Assignment?

2. Rubrics for Mile Marker vs non-Mile Marker courses

   – Because Mile Markers are intentionally aligned to Gen Ed outcomes and have built-in reflections, these artifacts cover several categories of review materials

   – Thus, non-Mile Marker courses have a more involved rubric

   – We want to encourage Gen Ed courses to adopt Mile Marker assignments!

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IUPUI Gen Ed Review: Committee Review

1. Each dossier reviewed by two subcommittee members using the relevant rubric (with Mile Marker or without Mile Marker)

2. Each reviewer makes an initial recommendation on the reviewed course (Reapprove, Reapprove with Notes, Revise and Resubmit, Probation)

3. After initial review and before presenting findings to UAC, reviewers meet as a group to discuss findings and clarify decisions on borderline cases

4. Committee report and recommendations on each group of courses are brought to UAC for discussion and vote

5. Final decisions and recommendations are sent to dossier preparers and the UAC representative from their school

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Common Reasons for Revise and Resubmit

1. Syllabus lacks language to indicate the course is a General Education course and how it supports relevant domain outcomes

2. Poor linkage between assignments/student work samples and gen ed outcomes, or lack of analysis to show extent of outcomes attainment

3. High DFW rates but no analysis or discussion of attempts made to address them

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SECTION 3

Future Directions and Improvements

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For Consideration

1. Is the focus on purely introductory courses still appropriate?

2. State mandate defined specific Gen Ed competencies in 2012; how do we ensure we're meeting these competencies and also contributing toward growth in the Profiles?

3. How can we better coordinate assessment activities – particularly of the Profiles – between UAC and PRAC?

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How Can PRAC Help?

Develop student-friendly language to describe statewide Gen Ed competencies:

Demonstrate knowledge of major concepts, theoretical perspectives, empirical patterns, or historical contexts within a given social or behavioral domain (STGEC 5.1)

Develop arguments about forms of human agency or expression grounded in rational analysis and in an understanding of and respect for spatial, temporal and cultural contexts (STGEC 6.6)

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How Can PRAC Help?

1. Volunteer as a Gen Ed reviewer (and thanks to those who have already done so!)

2. Input on the purpose of Gen Ed assessment, and how best to thread the needle on addressing multiple needs (compliance with developing state mandated competencies, assessment of Profiles) without further overburdening course coordinators

3. Serve as a resource on learning outcomes assessment to colleagues preparing dossiers (because this can be a source of stress for dossier preparers)

4. (Once we have more clarity on #2) Workshop or Community of Practice specifically on incorporating meaningful outcomes assessment into Gen Ed courses

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Questions? Contact Us!

Sara Lowe   mlowe@iupui.edu

Karen Alfrey   kalfrey@iupui.edu

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Special PRAC Preview

Trends in Assessment: Ideas, Opportunities, and Issues for Higher Education (2nd Edition)

Edited by:

Stephen P. Hundley, Ph.D.

Caleb J. Keith, Ph.D.

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About the Assessment Institute in Indianapolis

- Hosted by IUPUI, the Assessment Institute in Indianapolis is the oldest and largest U.S. event focused on assessing and improving higher education

- Each annual Institute features 1,100+ registered attendees 250+ unique educational sessions
  - Join us October 29-31, 2023, at the Indianapolis Marriott Downtown

- Enduring and emerging trends in assessment and improvement in its broadest meaning—representing all aspects of the collegiate experience

- Institute partners bring national perspectives on assessment and improvement

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About the Assessment Institute in Indianapolis

- In addition to the **annual conference**, we offer these resources:

  - *Assessment Update*, a bimonthly periodical with Wiley

  - *Trends in Assessment* book series with Routledge

  - *Leading Improvements in Higher Education* podcast

  - **Partnerships** with several national associations and research organizations

  - **Consulting and technical assistance** to various institutions and organizations

- Content available at **assessmentinstitute.iupui.edu**

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Trends in Assessment: Ideas, Opportunities, and Issues for Higher Education

- Periodic volume encapsulating enduring and emerging trends in teaching, learning, assessment and improvement

- Forthcoming 2nd Edition in October 2023 features 51 contributors, many of whom serve as organizers and partners of the Assessment Institute in Indianapolis
  - Partners include: AALHE, AIR, Center for Postsecondary Research/NSSE, HBCU-CEEQA, Piazza Center for Fraternity and Sorority Research and Reform, Learning Improvement Community, Student Affairs Assessment Leaders

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What Assessment Trends Are You Noticing/Experiencing?

- Using your own context as a point of reference, take 30-45 seconds to reflect on a couple of assessment trends you have noticed or experienced over the past 3-4 years

- Using the Chat feature, please register your trend(s)

- We will identify some of the major themes from PRAC colleagues

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Focus of *Trends in Assessment*

- Questions about current assessment trends—both enduring and emerging—in higher education framing our work:

  - How are we approaching the assessment of learning today?

  - How can assessment more effectively inform improvement efforts?

  - What are the implications for learning design? Pedagogy? Higher education broadly?

  - What are the **meta-trends in assessment** informing our work?

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Meta-Trends in Assessment

- Meta-Trend 1:
  Appreciate the role assessment contributes to understanding and improving the higher education ecosystem

- Meta-Trend 2:
  Foster opportunities to intentionally integrate diversity, equity, and inclusion in our work

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Meta-Trends in Assessment

- Meta-Trend 3:
  Focus on quality and fidelity in designing and implementing learning experiences

- Meta-Trend 4:
  Use inclusive sources and credible evidence in assessing learning

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Meta-Trends in Assessment

- Meta-Trend 5:
  Support the holistic development of students, including their personal, academic, and professional needs and identities

- Meta-Trend 6:
  Collaborate with students—as learning partners—to advance student learning and success

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Meta-Trends in Assessment

- Meta-Trend 7:
  Engage stakeholders throughout the learning enterprise, including in curricular, cocurricular, community, and experiential settings

- Meta-Trend 8:
  Build capacity for assessment through professional development, rewards, and recognition

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Meta-Trends in Assessment

- Meta-Trend 9:
  Promote institutional cultures to sustain, scale, and improve learning interventions

- Meta-Trend 10:
  Recognize that assessment remains a work-in-progress, reliant on individual and collective efforts to achieve its potential

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Crosscutting Themes in *Trends in Assessment*

- Clarifying, implementing, and assessing specific goals for learning

- Engaging students in the teaching and learning process

- Encouraging the use of evidence-informed High Impact-Practices

- Centering equity in our work

- An undercurrent of all these themes is **promoting inclusive instructional contexts for students**

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Promoting Inclusive Instructional Contexts for Students

- Creating a campus culture and climate that fosters student belongingness

- Developing interventions to support the holistic needs of learners

- Designing courses and learning experiences to intentionally include student voices, perspectives, and lived experiences

- Employing assignments and other forms of assessment to provide agency for students in their learning

- Engaging students and other stakeholders in processes related to their teaching/learning and assessment/improvement

- Identifying and addressing equity gaps in instructional contexts

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How Well Are We Doing This Work?

- Using your own context as a point of reference, take 30-45 seconds to reflect on how we promote inclusive instructional contexts for students

- Using the Chat feature, please register your thoughts on what we are doing well and areas for improvement—and why

- We will identify some of the major themes from PRAC colleagues

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Conclusion

- Q&A / Discussion

- Wrap-up

- Next Steps

- Resources:
  - **"Meta-Trends in Assessment"**
  - **"Summary of Main Trends from Chapters in *Trends in Assessment*"**

- Adjournment

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Summary of Main Trends from Chapters in *Trends in Assessment*

Excerpted from *Trends in Assessment: Ideas, Opportunities, and Issues for Higher Education, 2ⁿᵈ Edition* (forthcoming: October 2023), Edited by Stephen P. Hundley and Caleb J. Keith, Routledge.

Chapter 1: National Trends and Pandemic Expansions of Assessment Foundations

Natasha Jankowski, Divya Bheda, and Gianina Baker

Despite many years of existence, assessment is yet to be fully recognized and examined as a field of study in its own right. This chapter offers reflections on trends in assessment scholarship and practices including democracy and assessment; student involvement in assessment; equity and assessment; and trauma-informed and healing-centered approaches to assessment. The chapter concludes with an exploration of the learning systems paradigm and future directions focused upon collaboration, student involvement, and equity as the driver.

Summary of Main Trends:

- The COVID-19 pandemic led to wide scale change in higher education and a return to assessment basics with a focus upon collaboration, student-centered practices, and equity as the driver of process and practice.
- Professional development on assessment basics should address curricular coherence and transparency, involvement of students in assessment, faculty use of formative assessment, equity in assessment types, and integration with student affairs and cocurricular units.
- There is movement from institution-centric paradigms to those focused on developing systems in service to students. A critical examination of assessment theory may widen the foundations of assessment through exploration of intersections of theory and practice.
- Success as assessment professionals requires building relationships with colleagues and institutional leaders and inspiring them to believe in the value and utility of assessment beyond checklist mentalities.
- Four recent conversational trends in assessment that may help the field move beyond accountability versus improvement conversations include democracy and assessment; student involvement in assessment; equity and assessment; and trauma-informed and healing-centered approaches to assessment.

Chapter 2: Applying a Diversity, Equity, Inclusion, and Justice (DEIJ) Lens to Assessment

Michele Hansen and Corinne Renguette

This chapter examines assessment methods and practices through a diversity, equity, inclusion, and justice-oriented (DEIJ) lens. Assessment practices need to be continually reexamined and reimagined to end the perpetuation of policies and practices that create and sustain inequities. Three major trends in equity-based assessment work are highlighted: assessment for social justice and practices to remedy inequities in higher education, culturally responsive assessment methods and analyses, and holistic assessment that considers intersectionality.

Summary of Main Trends:

- There is an increased focus to ensure assessment practices and methods are socially just and evidence-based, consider power structures, and promote equity rather than enhancing or even maintaining inequities.
- Assessment practitioners and scholars play a vital role in supporting institution-wide DEIJ efforts and helping institutions live out a commitment to DEIJ.
- Assessment practitioners must integrate DEIJ at all levels of assessment practice: developing assignments; articulating student learning outcomes and involving students in assessment work

and outcomes development; and developing faculty who can assess the student holistically, disaggregate data, and consider intersectionality of identities.

- Internal assessment practices must support the recruitment and retention of diverse assessment professionals; ensure access and opportunities to learn about current trends in equity and inclusion; hire assessment practitioners who represent diversity; and offer opportunities for continuous learning about DEI trends as part of assessment culture.
- When working to integrate DEIJ into assessment efforts, it is important to consider social, institutional, and external contexts.

Chapter 3: When Done *Well*: A Primer on Where We Are and Where We Are Going in High-Impact Practices (HIPs)
Amy Cicchino, Ken O'Donnell, Robin Schofield, and Brandi Gilbert
This chapter offers an introduction to 11 high-impact practices (HIPs), 10 elements of HIPs, and HIPs assessment methods. Though the 10 elements are intended to ensure quality, each has the potential to reify barriers to access and student success. Equity-driven delivery and assessment methods are essential for making the most of HIPs for local contexts and historically marginalized student groups. Authors suggest explorations among HIPs, adult learning theories, and culturally relevant pedagogies.
Summary of Main Trends:

- The framework of "High-Impact Practices" (HIPs) has brought together disparate, powerful pedagogies such as learning communities and undergraduate research to examine how these pedagogies positively impact student success. Assessment is emerging as one key to assuring HIPs are done well.
- Although the history of HIPs has created professional communities—like HIPs in the States—and a body of growing research, practitioners must build on this foundation through equity-driven design and assessment. By nuancing how HIPs have measurable impacts for local contexts—and the learning experiences of historically marginalized student groups within those contexts, especially—we can embed quality HIPs delivery from the ground up.
- There are layers to HIPs assessment, including programmatic assessment for continuous improvement, evaluating the impact of the experience, and changes and improvements. Current assessments are considering the context of the institutional setting and culture, intentionally designed with equity in mind and with the understanding not all learners experience HIPs the same way.
- The 10 key elements of HIPs can ensure quality, but can likewise create barriers, especially related to culture and context. These elements have directly informed HIPs design, delivery, and assessment for over a decade. To inspire student engagement, practitioners increasingly contextualize the elements creating more student-centered, culturally relevant HIPs.
- Both HIPs and adult learning theories emphasize the importance of social-emotional experiences, interaction, agency, real-world relevance, hands-on learning, and reflective practice. Intentionally cultivating the overlapping connections between these two theoretical frameworks gives us more avenues for reaching a diverse student body.

Chapter 4: How HIP Are You? Assessing the Impact of High-Impact Practices
Sara Evans, Jerry Daday, Jennifer Thorington Springer, and Jo-Ellen Becco
With the knowledge High-Impact Practices (HIPs) afford students valuable opportunities to connect and apply their learning to life experiences, it is imperative that faculty integrate these best practices within their pedagogy and institutions set goals within their strategic plans to ensure all students have an opportunity to engage in at least one to two HIPs throughout their academic tenure. The value of

such engaged learning activities has been duly noted within higher education as critical to student success. Although the benefits and outcomes of HIPs have been well documented through extant research, assessment of these practices is limited in scope and needs to be expanded to look more closely at the tools used to measure the impact of the HIP. This chapter examines what currently exists regarding assessing the impact of a HIP and provides suggestions for the future of this work.

Summary of Main Trends:

- There is a large amount of research assessing the impact of HIPS on students, their success, and their learning gains. This research suggests HIPs are high-impact "when done well."
- Less research discusses the assessment of HIPs from a project design perspective to evaluate how "high impact" these experiences are. The field has relied on the eight key elements of HIPS for fidelity of implementation.
- Emerging research uses taxonomies to classify HIPs on a spectrum of impact. Taxonomies incorporate the eight key elements (e.g., importance of reflection) while specifying dimensions of quality implementation for specific HIPs (e.g., undergraduate research and service-learning).
- Future assessment work should examine how levels of implementation (high impact, higher impact, highest impact) impact student outcomes and learning.
- Recent research on HIPs also highlights the importance of attention to equitable access when designing HIPs for the most impact.
- Future research should explore the use of taxonomies in greater detail while retaining a focus on cultural relevance and attention to equity.

Chapter 5: Assessing Student Needs, Learning, and Impact Beyond the Classroom: Trends in Student Affairs and Cocurricular Assessment

Caleb J. Keith, Zachary N. Clark, A. Sonia Ninon, and Linda A. Wardhammar

Student affairs and cocurricular assessment plays a crucial role in the contemporary higher education environment. Cocurricular educators work in a number of campus contexts to address the needs of students and facilitate learning beyond the classroom. As such, this chapter provides a synopsis of the history and progression of cocurricular assessment; current trends in cocurricular assessment, including collaborative partnerships, equity-minded assessment, and innovative practices; and future directions, including professional development, predictive modeling, and data visualization.

Summary of Main Trends:

- Institutions are intentionally employing needs assessment and "just in time" education in cocurricular settings in response to societal change and the shifting landscapes of contemporary higher education.
- Cocurricular educators must forge meaningful partnerships with key campus units—including, but not limited to, academic affairs, institutional research, and information technology—to best inform data collection and analysis, methodologies, team input, and software implementation.
- On campuses and across professional organizations, there has been a growing commitment to equity-minded assessment, addressing bias, constructing socially just protocols, and embracing individuality.
- The number of staff dedicated to cocurricular assessment has continued to grow, as have needs for increased professional development opportunities focused on breadth and depth; however, visible deficiencies still exist in both the number of staff and their assessment preparation and comfort.
- Cocurricular educators have introduced pedagogical approaches to cocurricular learning, intentionally incorporating assessment protocols into program planning and embracing other emerging promising practices, such as mapping and program theory.

- Five key future directions will influence cocurricular program assessment in the coming years: professional development, predictive modeling, data visualization, data warehousing and data sharing across institutions, and the impacts of fluctuating enrollment upon available resources to support vital assessment work.

Chapter 6: Student Partnership and Engagement in Assessment
Nicholas A. Curtis and Robin D. Anderson
This chapter covers the current state and future directions of student partnership in assessment in higher education. Student partnership in assessment involves students actively participating in the design, implementation, and evaluation of their own learning experiences. This trend in assessment practice is driven by a desire to create more equitable and meaningful learning experiences and to address concerns about accountability in higher education. Currently, there is limited research on the outcomes of student partnership in assessment, but the trend is likely to continue growing in the next few years, facilitated by technology, self- and peer-assessment, and a greater focus on student-centered learning. Future research is needed to support student partnership as an evidence-based practice and to understand when and how it works best.
Summary of Main Trends:
- Partnerships with students in program-level work, especially related to assessment, have been gaining popularity over the past 5 years. This trend will continue to grow with more visible examples showing up at professional conferences and in the assessment literature.
- The consideration of diversity, equity, and inclusion in assessment work is not optional. However, how we engage is still up to individuals and institutions. There is ample evidence student partnership is one effective vehicle to elevate and promote the voices of those students who have historically not had one in our processes.
- When considering where to start with a new idea, it usually makes sense to consider the beginning. This holds true for student partnership in assessment as well. We have seen, and will continue to see, more students working collaboratively with faculty and staff on setting, revising, translating, and/or promoting student learning outcomes than any other piece of the assessment cycle.

Chapter 7: Advancing STEM Education Through Quality, Equity, and Evidence
Darrell D. Nickolson, Wayne J. Hilson, Jr., and Stephen P. Hundley
Science, technology, engineering, and mathematics (STEM) disciplines represent a diverse set of academic programs, typically requiring prerequisite foundational knowledge in mathematics and science, and usually incorporating laboratory and other experiential components in the learning process. Considerable investment by the U.S. federal government and others in STEM education demonstrates the significance these disciplines play in meeting demands of the economy, including implications for workforce development. This chapter describes important trends related to identifying and assessing goals for STEM learning; using evidence-informed interventions in STEM; promoting STEM equity; and preparing for an integrated and technology-influenced STEM future.
Summary of Main Trends:
- International competitiveness, demand for STEM labor, and advances in science and technology throughout society all call for enhanced goals for STEM learning connected to quality assessment practices.
- Considerable investment and research has occurred in STEM education, resulting in numerous promising practices that enhance our understanding of STEM student learning and success, and adoption of evidence-based pedagogies and changes in STEM curricula is needed in order for courses and programs to remain relevant.

- To meet needs for a STEM-educated workforce, attention is required to recruit and retain STEM students, including expanding and diversifying the talent pipeline to attract those who have historically been underserved by STEM disciplines.
- Ongoing attention is needed to create STEM cultures to intentionally address longstanding STEM inequities, primarily related to gender, race, and ethnicity, yet increasingly includes ability status, religious and cultural backgrounds, and sexual orientation, among others.
- Real-world challenges relying on innovative solutions will require integration of STEM concepts in the curriculum, including opportunities for students to work in an interdisciplinary manner through learning that is collaborative, creative, and project-based.

Chapter 8: The Evolving Impact of Authentic Assessment Practices in Graduate and Professional Education
Sarah Zahl, Peter Altenburger, Jeff Barbee, and Susan Kahn
Though most undergraduate programs have adopted authentic assessment practices, many graduate and professional programs have held tightly to more traditional assessment methods. As all levels of educational programs face increasing pressure to prepare learners for the eventual workplace, assessment must align with the practices graduates will experience in actual professional environments. This chapter explores ongoing challenges related to these efforts as well as strategies to move toward more authentic measures of student learning in graduate and professional education.
Summary of Main Trends:
- To promote more authentic assessment in graduate and professional education, programs should facilitate assessment aligned with practices students will experience in their eventual professional environments.
- Admissions processes across graduate and professional programs have traditionally focused solely on academic metrics. More recently, the move toward more authentic and holistic student selection includes valuing applicants' experiences and attributes that shape real world perspectives.
- Many schools are developing alternatives to the dissertation requirement and adopting culminating assessments that serve as a foundational resource for future employment (e.g., portfolios, smaller publishable papers, etc.).
- Professional formation programming often lacks structured learning experiences and authentic assessment practices. Graduate and professional learners need structured reflection, faculty facilitation, and real-life scenarios to support appropriate growth and development.
- Authentic assessment practices are essential to prepare graduate and professional students for their eventual careers. However, it is often difficult and time consuming to transition to these practices. It is important to develop a long-term transition plan and include faculty development opportunities.

Chapter 9: Faculty Development: Moving Toward Equity
Seonmi Jin, Krista Longtin, and Megan M. Palmer
Understanding how to help faculty in addressing diversity, equity, inclusion, and justice (DEIJ) is a serious challenge facing individuals engaged in faculty development. This chapter outlines how faculty development related to DEIJ has expanded to focus on increasing the competence of faculty to create more inclusive classrooms. The chapter includes discussion of how DEIJ faculty development that includes evaluating privileges and marginalization has received increased attention. Finally, the chapter highlights future trends such the shift from broad diversity efforts to a focus on anti-racism and how faculty hiring and reward systems may change to account for DEIJ. The authors conclude by offering an approach to assessing more complex, institution-level DEIJ activities.

Summary of Main Trends:
- Implementing and assessing diversity, equity, inclusion, and justice interventions for faculty in higher education can be considered a "wicked problem" because the process is complicated by indefinite, pluralistic, and confounding factors and cannot be solved with one single effort.
- A number of scholars have recently found connections between faculty member's individual development and reflection in DEIJ efforts and their willingness to engage in inclusive teaching and organizational improvement in these areas.
- Aligning affective learning outcomes and program evaluation frameworks might be one strategy to ensure faculty developers are making impact in DEIJ at both the individual and institutional level.
- Future efforts assessing faculty development in DEIJ should seek to measure both faculty members' knowledge and attitudes toward improvement and growth for lasting change to occur.

Chapter 10: Achieving and Scaling Learning Improvement
Keston H. Fulcher and Caroline O. Prendergast

Improvement of student learning is the often touted, yet rarely achieved, goal of assessment. This chapter details a six-step approach to structuring learning improvement initiatives, using examples from a general education program. Further, the authors dispense advice regarding the selection, evaluation, and facilitation of potential learning improvement projects. Given the recent advancements described in this chapter, the question is no longer how to foster learning improvement, but how to scale learning improvement efforts more broadly.

Summary of Main Trends:
- In the decades prior to 2010, learning improvement was often noted as a goal of assessment; however, practical guidance was rare and the concept ill-defined.
- Since 2010, notable progress has been made in setting standards for learning improvement and developing models for learning improvement initiatives.
- Scaling learning improvement—so that examples are more prevalent across higher education—is the next hurdle.
- Learning improvement is well-poised as a tool to reduce disparities in higher education, enhance the efficacy of High-Impact Practices (HIPs), and strengthen student partnerships.

<div align="center">**Meta-Trends in Assessment**</div>

Excerpted from *Trends in Assessment: Ideas, Opportunities, and Issues for Higher Education, 2ⁿᵈ Edition* (forthcoming: October 2023), Edited by Stephen P. Hundley and Caleb J. Keith, Routledge.

<div align="center">**An Overview of the 10 Meta-Trends in Assessment:**</div>

- Meta-Trend 1: *Appreciate the role assessment contributes to understanding and improving the higher education ecosystem*

- Meta-Trend 2: *Foster opportunities to intentionally integrate diversity, equity, and inclusion in our work*

- Meta-Trend 3: *Focus on quality and fidelity in designing and implementing learning experiences*

- Meta-Trend 4: *Use inclusive sources and credible evidence in assessing learning*

- Meta-Trend 5: *Support the holistic development of students, including their personal, academic, and professional needs and identities*

- Meta-Trend 6: *Collaborate with students—as learning partners—to advance student learning and success*

- Meta-Trend 7: *Engage stakeholders throughout the learning enterprise, including in curricular, cocurricular, community, and experiential settings*

- Meta-Trend 8: *Build capacity for assessment through professional development, rewards, and recognition*

- Meta-Trend 9: *Promote institutional cultures to sustain, scale, and improve learning interventions*

- Meta-Trend 10: *Recognize that assessment remains a work-in-progress, reliant on individual and collective efforts to achieve its potential*

Meta-Trend 1: Appreciate the role assessment contributes to understanding and improving the higher education ecosystem

Assessment efforts continue to provide faculty, staff, administrators, and other stakeholders contributing to the higher education learning enterprise with plentiful opportunities to better understand strengths and challenges associated with learning facilitated across our courses, programs, cocurricular activities, entire campuses, and with partners in the community—no matter wherever or however "community" is defined. Intentional, pervasive, and systematic assessment processes compel us to establish goals for learning; align resources to support those goals; implement evidenced-informed interventions designed to foster student learning and development; periodically

take stock of progress toward learning achievement by using a variety of assessment methods; make evaluative judgments based on assessment findings; and foster ongoing improvements and innovations within our respective contexts. Indeed, integrated approaches to assessment can both demonstrate and ensure institutional stakeholders take student learning and success seriously and that results of assessment—and the resulting improvements—are communicated transparently to internal and external audiences.

Meta-Trend 2: Foster opportunities to intentionally integrate diversity, equity, and inclusion in our work

As colleges and universities increasingly attract students who have historically been under-served, -represented, and -resourced by higher education institutions, our structures, cultures, and practices will need to be developed or adapted to serve these students. Teaching and learning processes—and the assessment practices that accompany them—need to be both culturally-responsive and equity-centered. Among other things, this requires us to incorporate instructional practices and perspectives that consider the diverse array of students we serve; disaggregate data to call attention to the experiences and needs of specific populations; create educational interventions to address equity gaps, thereby ensuring all students have the opportunity to be successful; challenge, disrupt, or dismantle oppressive policies, practices, structures, or systems; and broaden access to higher education generally, as well as to campus-specific resources and programs. Attending to issues of diversity, equity, and inclusion also requires us to be both thoughtful about comparison groups or benchmarks we use (e.g., making the "majority" group the default baseline or disproportionately focusing on "traditional" students' expectations or experiences) and mindful about who is included—and who may be unintentionally *excluded*—in the creation, implementation, assessment, and improvement of learning opportunities.

Meta-Trend 3: Focus on quality and fidelity in designing and implementing learning experiences

Quality in collegiate learning experiences begins by developing goals for learning that incorporate evidence- and practice-informed approaches and interventions in designing instruction. In addition to faculty and other local subject-matter-experts, quality instructional design is often informed and influenced by disciplinary and professional associations and accreditors, program and institutional peer or aspirant benchmarks, and best or promising practices as reflected in a review of the higher education professional literature, including the Scholarship of Teaching and Learning and discipline-based educational research literature. A quality perspective also insists on high standards of student performance that are challenging-yet-achievable and appropriate for the instructional context. *Fidelity* strives to ensure what is conceptualized during instructional or programmatic development is actualized in its implementation; this is often referred to as implementation fidelity. Among its many uses, implementation fidelity is especially salient for learning experiences that involve multiple stakeholders sharing responsibility for learning goals. These include multi-section courses, High-Impact Practices, instruction facilitated by adjunct or contingent faculty colleagues, and learning taking place with instructional partners in applied, experiential, or community settings.

Meta-Trend 4: Use inclusive sources and credible evidence in assessing learning

Assessment evidence is often reliant on relevant data, information, and artifacts employing a blend of direct, indirect, quantitative, and qualitative methods. Such credible evidence is often rooted in the norms, traditions, and customs of disciplines and professions. As a result, faculty and other subject-matter-experts are often in the best position to decide what counts as evidence, recognizing there is not—nor should there be—a "one size fits all" approach to assessing learning. Tools such as comprehensive learner records and ePortfolios—which have the potential to span multiple instances

of learning—continue to be venues to encapsulate, demonstrate, and display evidence of authentic student learning outcomes, including both reflective and integrative aspects of learning. There continues to be considerable attention to broadening the nature of assessment evidence to intentionally include students' backgrounds, perspectives, and lived experiences. Thus, designers and assessors of learning should consider their unique context to inform the appropriateness of instructional approaches and assessment methods, ensuring they reflect the needs, characteristics, and expectations of the students attracted to, and served by, the institution.

Meta-Trend 5: Support the holistic development of students, including their personal, academic, and professional needs and identities
Because students bring their "whole selves" to the learning environment, colleges, universities, and their partners are increasingly responsible for supporting students' holistic development. This begins by establishing and fostering a sense of belonging, including connections to supportive communities focused on attending to personal, academic, and professional needs and identities. A focus on *personal development of students* means we take the time and care to truly understand who our students are, including their backgrounds, levels of preparedness for the collegiate experience, and their identity formation, including intersecting identities. It also means we promote physical and mental wellbeing and focus on mitigating the myriad challenges faced by our students, including issues around food, clothing, and housing insecurity; financial needs; transportation and child- or elder-care considerations; and outside commitments, such as work, family, or community obligations. *Academic development of students* ensures we are providing timely and appropriate in- and out-of-class supports, including advising, tutoring, mentoring, supplemental instruction, and other wraparound services. It also means we develop guided pathways to degree completion that intentionally scaffold learning and employ educationally-purposeful and -meaningful learning opportunities, such as High-Impact Practices. Finally, attending to the *professional development of students* ensures we help students plan and prepare for graduate and professional education, employment opportunities, and lifelong learning. We do so by continually fostering professional identity formation and aligning instructional and assessment methods to desired graduate outcomes— be they from disciplines, from the institution, from the profession, and/or from national or other frameworks.

Meta-Trend 6: Collaborate with students—as learning partners—to advance student learning and success
Students are often one the best sources of information concerning their learning needs, processes, and outcomes. Assessment should not be done "to" students; rather, assessment should be a collaborative endeavor between the designers and implementers of learning experiences and the beneficiaries of such experiences. These include students and other stakeholders, such as employers, community members, and partners reliant on the demonstration of student learning in an applied or different context from which the learning was initially acquired. Although a focus on student learning *outcomes* is of paramount importance, it is also increasingly vital to assess and improve the *conditions, processes,* and *experiences* contributing to the learning. Thus, a holistic view of learning—informed by the student perspective—is imperative. Collaborating with students as learning partners could include involving students in the creation and review of learning outcomes statements and in the interpretation of assessment findings. Student partnership and collaboration aids in ensuring institutional systems are serving students as intended. Much as the Scholarship of Teaching and Learning has advocated for student-centered approaches, so, too, should efforts to assess and improve student learning opportunities and experiences.

Meta-Trend 7: Engage stakeholders throughout the learning enterprise, including in curricular, cocurricular, community, and experiential settings

The dynamic nature of higher education recognizes that student learning and development transcends individual programmatic, disciplinary, or institutional structures. Indeed, the contexts in which learning and development takes place include institution-wide goals for learning; initial socialization and integration touchpoints; the general education program; academic programs and courses; High-Impact Practices and related interventions; support services and resources; and learning experiences complementing the curriculum: in cocurricular, community, and experiential settings. Given this extensive array of instructional venues, a host of stakeholders need to be engaged in assessing and improving learning. These include presidents, provosts, and institutional policymakers; deans and leaders of divisions or units; department chairs and program directors; faculty governance leaders; individual faculty and staff colleagues; institutional and program partners; students and student government leaders; alumni; and employers and community members. Certain stakeholders—institutional researchers, assessment professionals, registrars, student affairs educators, academic advisors, educational developers, field or internship preceptors, coaching and athletic staff—have access to unique or discrete data and information sources to enhance our collective understanding of the student experience. Employing intentional strategies for broad stakeholder engagement in assessment and improvement, on a periodic basis, provides robust opportunities to capture a more comprehensive view of the learning and development landscape being experienced by students.

Meta-Trend 8: Build capacity for assessment through professional development, rewards, and recognition

Institutions committed to effective assessment practices strive to develop capacity for this work across campus and with external learning partners. Professional development opportunities can be offered through teaching and learning centers, campus and unit assessment committees, or other bodies. Capacity-building for assessment often engages assessment and institutional research professionals in providing internal consulting and assistance in developing interventions, using appropriate assessment methods or measures, and interpreting findings. Leveraging the capabilities of institutional systems and processes that support assessment—learning management systems, institutional accreditation and program review activities, and the work of campus-wide councils and committees—is another capacity-building strategy, as these provide recurring opportunities to build or strengthen a culture of evidence reliant on assessment. Furthermore, rewarding and recognizing the time, energy, and effort needed to effectively engage in assessment needs to be valued by administrators and colleagues. This can include annual merit increases; incentives that target strategic institutional priorities, including those associated with student success efforts; and promotion, tenure, and advancement opportunities. Finally, for assessment to sustain improvement and engage faculty and staff, reward and recognition systems for assessment must be embedded in the institution's culture, reflecting a larger set of values derived from institutions' teaching and learning missions.

Meta-Trend 9: Promote institutional cultures to sustain, scale, and improve learning interventions

Inherent in the assessment process is a commitment to continuous improvement, including sustaining those activities, interventions, and outcomes that are working well for students, programs, and the institution. Attention needs to be given to the sustainability of practices deemed effective, informed from assessment findings. We also need to scale worthwhile interventions working well in one part of the institution to the institution as a whole, and effective outcomes from select or isolated student populations to our entire student body. Doing so requires attention to the quality and fidelity of learning experiences, along with the goal of broadening access to valuable and significant learning experiences for *all* students. In addition to making ongoing improvements, we also need to

continually identify ways to innovate what we are doing to provide opportunities for differentiating our instructional, programmatic, or institutional offerings. This will permit us to compete in an increasingly crowded higher education marketplace and respond to dynamic societal needs. Promoting cultures to sustain, scale, and improve learning requires us to have in place the strategies, policies, resources, infrastructure, leadership, and, importantly, collective commitment to make student learning an ongoing institutional priority.

Meta-Trend 10: Recognize that assessment remains a work-in-progress, reliant on individual and collective efforts to achieve its potential

Against a compelling backdrop of continually evolving contextual factors across the higher education ecosystem, we have a responsibility to systematically assess and improve courses, programs, services, and experiences on college and university campuses and, indeed, in any setting where learning occurs. Despite numerous examples of assessment methods, practices, and outcomes demonstrating progress in the collegiate context, many experts agree assessment still has a long way to go to realize its full potential. One perennial trend is the need to recognize what and how we assess and, importantly, how assessment results can be best used to foster genuine improvements in student learning. Such actions are reliant on both individual and collective efforts through actions taking place wherever, whenever, or however learning occurs—in individual assignments, courses, programs, or units; across institutions, systems, disciplines, professions, or partnerships; and through macrolevel goals or initiatives more broadly in higher education. Isolated, fragmented, and disconnected efforts will likely not "move the needle" on assessment realizing its potential in higher education. As an ecosystem, we must encourage and engage in continued dissemination of practices, strategies, and findings so examples are increasingly visible and prevalent throughout higher education—representing and responding to the vast array of settings, contexts, and structures in which learning and development occurs. Additionally, it is imperative for assessment findings to be connected to subsequent improvement efforts. Thus, for assessment to realize its fullest potential, leadership at all levels should insist on using credible evidence to effectively inform subsequent interventions. Doing so intentionally and consistently will create contexts fostering improvements and innovations for the purpose of delivering on the promise of higher education.

"Mile Marker" Assignment
Base Line Criteria

Mile markers allow a traveler to check their progress toward a destination. "Mile Marker" assignments allow instructors to track and compare student progress toward defined learning outcomes. A Mile Marker assignment is an assessed exercise or activity given in all sections of a single course during an academic term. These assignments are designed to assess learning in a specified domain or competency. They provide a common denominator that allows faculty to track and analyze student progress in and across course sections. All General Education courses at IUPUI are encouraged to include a Mile Marker assignment. When a Mile Marker assignment is used, it is possible to submit an abbreviated dossier for review for the general education course review.

General education courses at IUPUI are designed to develop fundamental skills for intellectual inquiry and intellectual breadth and adaptiveness.[1] Courses are categorized into five domains, three that prepare students for intellectual inquiry (Analytical Reasoning, Core Communication and Cultural Understanding) and two that develop intellectual breadth and adaptiveness (Ways of Knowing, specifically Life and Physical Sciences; and Arts, Humanities and Social Sciences).

General Education courses are required to align with Statewide Transfer General Education Core (STGEC). The STGEC is based on competencies in six areas: Quantitative Reasoning; Speaking and Listening; Written Communication; Humanistic and Artistic; Scientific; Social and Behavioral. The State also identified specific learning outcomes associated with each competency. The outcomes can be found at:
https://www.in.gov/che/files/STGEC%20Guidance%2013May22.pdf.

Each school, department or academic unit has identified the appropriate learning domains relevant to its courses. Schools with courses listed on the General Education course list also are required to identify the specific STGEC learning competencies and outcomes that the course will satisfy. When a general education course is reviewed by the Undergraduate Affairs committee, it is necessary to demonstrate how the course advances at least three of the learning outcomes in the primary domain selected by the school. The Mile Marker assignment is a preferred instrument for making this showing.

Mile Marker assignments can take a variety of forms. Most any type of assignment or assessment tool can be properly used to track student progress toward an assigned learning domain, including, for example, questions within an exam, presentations, written or creative works, or structured projects and activities. The nature of the assignment can and should be consistent with expectations common in the domain. *A Mile Marker assignment must be evaluated using a common rubric that specifically indicates student progress toward attainment of one or more STGEC learning outcomes.* The rubric, as well as a description of the assignment and samples of student work must be submitted as part of the General Education Review.

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[1]For more information about General Education at IUPUI, see https://due.iupui.edu/undergraduate-curricula/general-education/iupui-general-education-core/index.html

Although the Mile Marker assignment need not be absolutely identical across multiple sections or semesters, the assignment should be sufficiently similar to allow comparison of student work.

In addition to the Mile Marker assignment itself, there should be an opportunity for students to reflect, which can occur in a variety of formats, on how the skills and knowledge in the course contribute to one or more of the PLUS profiles. The prompt for such reflection need not refer to PLUS explicitly, although the relevance to PLUS should be explained in the course review materials. This reflection could be a component of the Mile Marker assignment, or might occur elsewhere in the course, as in a homework assignment, lab section, or essay. The reflection exercise should be required for students to complete, but it does not need to be graded or counted as part of the course grade.

When a course includes a Mile Marker assignment, the items requested for the periodic general education review include:

- Course syllabus (multiple syllabi if sections differ)
- Report of DFW rates (available on IRDS website; DFW rates above 20% require analysis)
- The Mile Marker assignment
- Explanation of how the assignment develops the relevant general education learning outcomes and contributes to the Profiles of Learning for Undergraduate Success, including an explanation of how the rubric or other assessment tool used to evaluate it demonstrates this development
- The reflection prompt and explanation of its relation to the Profiles of Learning for Undergraduate Success
- Samples of student work generated by the assignment (maximum 20 samples per version of the syllabus; for classes with enrollment below 20, please include the work of all students)
- Reflection prompt and brief discussion of what student responses indicated about their learning

Examples of well-designed Mile Marker assignments and reflection exercises follow. These examples demonstrate the variety of acceptable possibilities. Other formats may also be used if they can be shown to promote and demonstrate relevant learning. Ideal assignments are also transparent in that they explicitly state the competencies the exercise assesses.[2]

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[2] For more on this, see TILT: Transparency in Teaching and Learning, https://tilthighered.com/

Physical Science Questions

Multiple choice—Astronomy A105

Which of these types of objects help show that the universe is expanding?

a. planetary nebulae

b. type Ia supernovas

c. red giant stars

d. globular clusters

e. exoplanets

[This question shows whether the student has understood how theories are validated by asking them to show that they understand an example.]

Multiple choice—Astronomy A105

How do we use type Ia supernovas in establishing the expansion of the universe?

a. As an example of inflation

b. As a standard candle

c. As a Hubble constant

d. As a cosmological principle

e. As a redshift survey

Multiple choice—Physics P202

Which of these statements best describes the relationship between Einstein's theory of special relativity and Newton's laws of motion?

a. Einstein's theory is correct, and Newton's is not. Relativity will replace Newton's laws over time.

b. Both Einstein's and Newton's theory are correct, but they describe completely different physics problems.

c. Einstein's theory is correct, and Newton's is not. Relativity will not replace Newton's laws, though, because it does not apply to real world situations.

d. Einstein's theory is correct, and Newton's is not, in the case of large velocity, but they give the same results for small velocity.

e. Einstein's theory is the same as Newton's, but adds the idea of mass-energy equivalence ($E = mc^2$).

[Demonstrates the idea that scientific theories add to prior theories, without necessarily replacing them.]

Free response—Astronomy A105

A distant star recedes from us. The change in the wavelength ($\Delta\lambda$) over the stationary wavelength (λ_0) is found to equal: $\Delta\lambda/\lambda_0 = 0.0057$. Use the doppler formula to estimate the star's velocity (v), recall the speed of light is 3.0×10^8 m/s.

[Asks the student to apply a principle in support of a current theory.]

Multiple choice question—Physics 15200

You are an engineer at an aerospace firm. A client wants a satellite to be placed Earth orbit with an orbital radius of 3.3×10^7 m. How long will this satellite take to orbit the Earth?

a. 4.77 hours

b. 16.5 hours

c. 22.3 hours

d. 35.5 hours

e. None of the above

f. This cannot be determined without knowing the mass of the satellite

[Asks the student to apply knowledge to perform a basic calculation.]

Multiple choice questions—Physics 15200

Part I

You measure the force of a spring as a function of x, where $x = 0$ at the rest length of the spring. The result is found to be $F(x) = ax^3 + bx$ where $a = 10^4$ N/m^3 and $b = 40$ N/m. How much energy is required to stretch the spring by 5 cm?

a. 2.53 x 10^{-1} J

b. 8.86 x 10^{-1} J

c. 3.20 x 10^{-2} J

d. 6.56 x 10^{-2} J

e. None of the above

[Asks the student to combine and apply knowledge.]

Part II

If a mass is attached to the spring described above, and allowed to move on a frictionless surface, how can the motion best be described?

a. Simple harmonic oscillations

b. Approximately simple harmonic oscillations for small values of x

c. Oscillations, but not simple harmonic for any values of x.

d. Constant acceleration

e. None of the above

[Asks the student to think critically about underlying concepts.]

Free Response—Physics 25100

Initially, 3.5 moles of an ideal diatomic gas are held at 300 K in a volume of 0.05 m^3. The gas then undergoes the following three processes:

First: the volume is doubled at constant pressure.
Second: an isothermal compression back to its original volume.
Third: an isovolumetric process back to its starting point.

Please answer each of the following questions.

    a) Draw the P-V diagram for this process.
    b) Find the heat, work, and change in internal energy for each of the three processes.

[Asks the student to think critically about a complex process, decide what laws must be applied and in what sequence, and to communicate both graphically and mathematically.]

Short Answer Test Questions—Cultural Understanding

EALC-C 131 Beginning Chinese I Jing Wang

Please comment on Chinese numbers, days of week, dates, and months. Could you explain the differences between Chinese and English from a cultural perspective?

Please comment on the word sequence of the following phrase: Saturday, 7:30 pm. Could you explain the differences between Chinese and English from a cultural perspective?

Short Answer Test or Homework Questions—Social Sciences

Briefly detail the difficulties in conducting social science, giving examples to explain your answer.

Short Essay, Arts and Humanities

Art History 101

The purpose of this essay is to consider the variations and consistencies among the arts from all the periods and cultures discussed in this course, and how they suit the needs and priorities of the cultures that created them. In a paper of **two to three pages (=at least two full pages)**, please answer one of the essay questions listed below. In your answer, you should refer to at least **three specific examples** of art or architecture from at least **two different cultures or periods**.

Choose examples that illustrate your argument most effectively. For the purpose of this essay, the cultures and periods to choose from include: Prehistoric, Ancient Near East, Ancient Egypt, Minoan, Mycenaean, Greek, Etruscan, Roman, Late Antique, Byzantine, Early Medieval, Romanesque, Gothic, or fourteenth-century Italian, Islamic, South Asian, East Asian, African, Mesoamerican, South American, and North American.

By planning and completing this assignment, you will be using art history to develop competencies that are found throughout the arts and humanities disciplines. These include:

1. Recognize and describe humanistic, historical, or artistic works or problems and patterns of the human experience

2. Apply disciplinary methodologies, epistemologies, and traditions of the humanities and the arts, including the ability to distinguish primary and secondary sources

3. Analyze and evaluate texts, objects, events, or ideas in their cultural, intellectual or historical contexts

4. Analyze the concepts and principles of various types of humanistic or artistic expression

5. Create, interpret, or reinterpret artistic and/or humanistic works through performance or criticism

6. Develop arguments about forms of human agency or expression grounded in rational analysis and in an understanding of and respect for spatial, temporal and cultural contexts

Select one of the following questions:

1. Visual art and architecture are often used to reinforce power structures. Select three works that express, support, or enforce power and explain what kind of power is referenced in each. Discuss the relationship between the works of art and the varieties of power. Be sure to consider issues such as audience, access, and function.

2. No living person knows what happens after death, but many works of art have been made and used in contexts having to do with death. Compare three works of art or architecture that express or serve different ideas about death and what happens after it. Discuss the ways the arts suit the concept of death and the afterlife as understood in each of the relevant cultures.

3. All works of art have meaning in their original cultural contexts, but some works of art acquire additional meanings later when they are changed or reused in other contexts. Discuss three works of art that were reused or reinterpreted by later users *before the modern era*, and how these subsequent meanings incorporated or conflicted with the intentions of their original creators. (Think of actual works of art or architecture that changed hands or buildings that were repurposed, not just artistic ideas that were imitated.)

Guidelines: Your paper should be 2-3 pages, double spaced, 12- point font. Please refer to quotations or paraphrases from the textbook by page number, and to images in the book by figure number. It is not necessary to do research beyond the textbook and your notes, but if you do, be sure to credit your sources using footnotes or endnotes. Your paper should be presented using standard English grammar and usage and should reflect your mastery of formal academic writing (this doesn't mean awkward and stilted, just no slang).

Your paper should have a thesis. Use the examples together to make a broader statement about the topic. Don't just explain one work and then the next. You will probably need to narrow down one of these questions in order to make a focused argument. **Your examples should serve to support your thesis.** A subtle and well-developed thesis will earn a better grade than an obvious and superficial treatment, so choose your examples with care and tie them together meaningfully. Choosing the best possible examples is the key to making a good paper. This is a short paper so you will need to be concise.

Reflection Question—MATH-S 165 Analytical Reasoning

The following question was asked on the third test of the semester, in late November. The students were not told ahead of time that this question would be on the test, so they did not have time before the test to prepare any special answers.

The question:
"What have you learned about the nature of mathematics or calculus that you did not know before taking this class? There is no right or wrong answer, but thoughtful responses will receive more points. If you can, try to include one or more specific examples to illustrate your thoughts."

[This question was worth 10 points on the exam. Because of the difficulty in fairly evaluating the responses, everyone received the full 10 points for their answer.]

Signature Assignment (includes reflection)—Core Communication

COMM-R 110

LEARNING OPPORTUNITY

Question of Policy Speech: Monroe's Motivated Sequence

To create and perform an effective Question of Policy persuasive speech using Monroe's Motivated Sequence

What Is Question of Policy?

As you read in Section 3.2, a question of policy is an argument that advocates for a specific solution to a problem, policy, or course of action. Questions of policy usually include the word *should*; for example, some- thing *should* be done to solve x. Question of policy speeches always include a solution and/or action step.

What Is the Question of Policy Speech?

The question of policy speech, also called the Monroe's speech, asks you to identify a problem and propose a solution. In many ways, this speech is the culmination of your work in this class. You will use the skills you

Title: Question of Policy Speech (also called Monroe's Motivated Sequence)

Type: Persuasive

Time: 7–8 Minutes

Written Format: Three-Column Outline

Organizational Structure: Monroe's

Note Cards: 3 (optional)

Visual Aids: Yes

Sources: 5

Deliverables: Adaptation paper, 3-column outline, reflection paper

have learned this semester to gather and focus your audience's attention, convince us that a problem exists, prove to us that your solution will work, enlighten us about the benefits of the course of action you advocate, and move us to action. This group of five steps is Monroe's Motivated Sequence.

Monroe's Motivated Sequence is very deliberate in its organizational structure. Make sure to read Section 3.8 on persuasive organization and particularly the section on Monroe's Motivated Sequence. Once you have done that, you will create a claim that calls for specific action (or the stoppage of action) to address a problem. This claim will guide your steps in Monroe's Motivated Sequence.

What Will Monroe's Look Like in Your Speech?

Monroe's Motivated Sequence

Attention:

INTRODUCTION

I.   Attention-Getter

II. TIA (Relevancy)

III. Credibility

IV. Thesis

Need:

BODY

I.   What needs to change?
(This first point convinces us there is a problem.)

   A.   Support and evidence

   B.   Support and evidence

> The Problem

Satisfaction:

II. This is how we solve it.
(This should be big picture.)

   A.   *Example* new idea

   B.   *Example* change in strategy

> The Plan

Visualization:

III. What a wonderful world this would be once the plan is in place.

   A.   Examples (linked with needs)

   B.   Examples

> The Benefits

Action:

CONCLUSION

I.   This is what we have to do (be specific).

   A.   Write a letter to_____.

   B.   Stop eating_____.

   C.   Donate money to_____.

   D.   Start exercising.

   E.   Sign this petition.

II. Review main points

III. Clincher

> The Audience's To-Do List (2–3 Steps)

What Helps Define a Good Question of Policy Speech Topic?

Monroe's is a very comprehensive approach to persuasion. Over the years it has become clear that almost any persuasive topic can be used within Monroe's Motivated Sequence, yet there are a few guidelines to help make topic selection more effective.

Use Monroe's to evaluate potential topics. If the topic leaves a natural gap in Monroe's (a section that is not easily answered), make sure it is a section you are comfortable addressing. An example of this is a problem that does not lend itself to a viable solution. Since Monroe's requires all of these elements of persuasion, if there is no solution, it is not an appropriate topic.

Personal connections matter. Of course you should feel a strong connection to your topic, but more importantly, you must be able to create a strong connection between the topic and your audience. You should feel strongly about your question of policy topic; ideally, the existence of the problem should make you angry. You want to find a way to convey your conviction about the topic to your audience as well, so that they feel the impact of both the problem and the benefits. The connections might not be obvious at first, but as the speaker, you need to make sure you can make those connections so that the audience is part of the process, not passive observers.

What Makes a Question of Policy Speech Effective?

A question of policy speech may be deemed successful, in part, by the specificity, ease, and plausibility of the action steps. Every action step you choose should seem very specific and under- standable, something the audience is willing to do, and should clearly address the need or problem you have explained.

Action Steps Guidelines

Specific: We should have no doubts about your proposed action.

Easy: The more complex the action step is to accomplish, the less likely your audience will feel compelled to complete it.

Plausible: It is important that the audience see the connection between the solution you propose and how it will eradicate the problem.

Now What Do I Do?

Return to the persuasive speech What Should I Do Now? section on page 278 and review your task list to make sure you can successfully complete all of the tasks associated with this activity.