

Summary of the Literature

Higher education is

pedagogical reasoning
problem-based learning
scholarship of teaching

The study "Reshaping Teaching and Learning: The Transformation of Faculty Pedagogical Content Knowledge" by Claire H. Major and Betsy Palmer explores how a campus-wide problem-based learning (PBL) initiative influences faculty pedagogical content knowledge. The qualitative study revealed that faculty's existing knowledge and institutional interventions significantly shaped their new understanding of faculty roles, student roles, disciplinary structures, and pedagogy. This transformation was solidified through the communication of new knowledge. The study highlights the importance of professional development in teaching and suggests that structured institutional support can foster significant pedagogical changes among faculty.

1. Institutional Support for Pedagogical Change

Example: Provide release time, summer salaries, and resources for faculty development.

Action: Allocate funding and time for faculty to attend workshops, conferences, and training sessions on new teaching methods.

2. Collaborative Course Redesign

Example: Form teams of faculty to redesign courses using PBL.

Action: Establish interdisciplinary teams to collaboratively develop and implement problem-based learning modules.

3. Faculty Development Workshops

Example: Conduct workshops on PBL problem design, facilitation skills, and assessment.

Action: Offer regular faculty development sessions focusing on specific pedagogical skills and strategies for effective PBL implementation.

4. Ongoing Feedback and Reflection

Example: Use course portfolios and regular feedback from students, staff, and external experts.

Action: Implement a system of continuous feedback and reflection for faculty to evaluate and improve their teaching practices.

5. Creating a Supportive Community

Example: Promote peer discussions and collaborations on teaching practices.

Action: Foster a culture of collegiality and support where faculty regularly share insights and strategies for improving teaching and learning.

6. Encouraging Scholarly Teaching

Example: Encourage faculty to present and publish their teaching innovations.

Example

On Faculty Development of STEM Inclusive Teaching Practices

Dewsbury, Bryan M. 2017. On Faculty Development of STEM Inclusive Teaching Practices. *FEMS Microbiology Letters* 364. DOI: 10.1093/femsle/fnx179

Inclusive teaching
Faculty development
STEM education
Underrepresented students
Professional development

The article by Bryan M. Dewsbury explores the need for a comprehensive approach to faculty development in STEM inclusive teaching practices. It addresses the persistent retention gaps of underrepresented minorities (URMs) in STEM fields and critiques traditional deficit-focused approaches. The author advocates for shifting the focus to changing campus culture and instructors' mindsets through deep engagement with social contexts and histories of both faculty and students. The article emphasizes the importance of professional development for current faculty and calls for a transformation in pedagA

Example: Use diverse examples and multicultural content in STEM courses.
Action: Develop course materials that reflect a variety of cultural perspectives and engage students in intercultural learning activities.

5. **Creating Inclusive Classroom Environments**

Example: Foster a sense of belonging for all students.
Action: Implement classroom strategies that encourage collaboration, respect, and the inclusion of diverse voices.

6. **Understanding and Addressing Implicit Bias**

Example: Educate faculty about implicit biases and their impact on teaching and learning.
Action: Provide workshops and resources on recognizing and mitigating implicit biases in the classroom.

7. **Developing Long-Term Faculty Development Programs**

Example: Offer sustained professional development opportunities.
Action: Create a series of workshops, seminars, and mentorship programs that support ongoing faculty growth in inclusive teaching practices.

The Development of the Personal Self and Professional Identity in Learning to Teach

Teacher Identity
Professional Development
Constructive-Developmental Theory
Reflective Practice
Emotional Labor
Narrative Identity

The article by Rodgers and Scott explores the complex relationship between the personal self and professional identity in the context of learning to teach. It emphasises that teacher identity is formed and continually reshaped through interactions with social, cultural, political, and historical contexts. The authors argue that teacher education should address the development of the self by encouraging teachers to become aware of these contextual forces and to author their own professional identities. The paper highlights the role of emotions, relationships, and narratives in shaping identity and underscores the importance of

1. Encourage Reflection:

Teachers should engage in regular reflective practices to understand their experiences and the contextual forces shaping their identities.

Example: Maintain reflective journals documenting interactions, feelings, and professional growth.

2. Promote Self-Awareness:

Programs should foster self-awareness among teachers about their own beliefs, values, and biases.

Example: Use autobiographical writing and storytelling to explore personal and professional histories.

3. Create Supportive Environments:

Develop "holding environments" that provide both support and challenge to foster growth.

Example: Establish mentoring systems where experienced teachers guide new teachers through reflective dialogues.

4. Integrate Constructive-Developmental Theory:

Apply constructive-developmental principles to understand and support the varying developmental stages of teachers.

Example: Tailor professional development activities to meet teachers at their current stage and help them progress.

5. Facilitate Collaborative Learning:

Encourage collaboration and dialogue among teachers to share experiences and insights.

Example: Organize teacher study groups and reflective practice communities.

6. Acknowledge Emotions:

Recognize and address the emotional aspects of teaching and identity formation.

Example: Discuss emotional challenges openly in professional development sessions and provide strategies for managing them.

7. Focus on Context:

Help teachers understand the impact of social, cultural, and political contexts on their professional identity.

Example: Conduct workshops on the politics of identity and the role of teachers in society.



Example: A community college established a center for pedagogical innovation to support faculty adopting new teaching practices and conducting research on teaching and learning.

5. Focus on Diversity and Inclusion:

FLC should address

Faculty

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mentoring pairs new instructors with experienced online educators, and ongoing support ensures continuous improvement and adherence to best practices. The approach has resulted in increased faculty preparedness and satisfaction, contributing to the overall success of online learning programs at the institution.

1. Initial Orientation

By implementing these practical actions, the three-tiered approach ensures that faculty are well-prepared for online teaching, leading to improved student learning experiences and higher satisfaction rates among both faculty and students.

Lawson, Duncan. "Getting Started in Pedagogic Research within the STEM Disciplines."
, 2023.

Pedagogic Research
STEM Education
Scholarship
Teaching Methods
Quantitative Methods
Qualitative Methods
Educational Improvement

This guide by Duncan Lawson outlines the foundational concepts and approaches for engaging in pedagogic research within STEM disciplines. The article defines pedagogy and

This study explores the use of multimodal communication across disciplines at a research-intensive public university. Through a survey of faculty, the research provides a snapshot of how multiple modes of communication are integrated into professional, scholarly, and pedagogical practices. Results indicate widespread use of multimodal assignments and a diversity of conceptualizations regarding the relationship between different modes. The study highlights the need for professional development re f

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By adopting these practical actions, faculty can enhance their ability to facilitate discussions on race, create inclusive learning environments, and support student engagement with critical social issues.

Bond, Nathan.

Transparent assignment design
higher education
student engagement
faculty development
COVID-19
learning outcomes
Metacognition
TILT framework.

This article discusses the implementation and benefits of transparent assignment design in higher education, highlighting various initiatives undertaken by faculty developers to enhance student engagement and learning outcomes. The authors draw on the Transparent Learning and Teaching (TILT) framework by Winkelmes, emphasizing the importance of clearly communicating the purpose, tasks, and criteria of assignments to students. The article includes reflections from teacher-scholars at Eastern Kentucky University, detailing how they have applied transparent teaching methods in their courses. The insights provided show that transparency in teaching not only fosters student motivation and performance but also reduces inequities and supports metacognitive learning.

1. Purpose, Task, Criteria Design:

Clearly articulate the purpose of each assignment, explaining why it is important and how it contributes to the course's learning objectives.
Break down assignments into specific tasks with detailed instructions.
Provide criteria for success, including rubrics and examples of high-quality work.

2. Flexible and Consistent Communication:

Use technology to offer flexible instruction alternatives, especially in virtual learning environments.
Ensure consistent communication and provide clear, organized course content to promote depth in learning.

3. Student-Centered Learning:

Design assignments that allow students to direct their own learning and connect tasks to their personal motivations and goals.
Include reflective activities that help students understand their learning processes and achievements.

4. Faculty Development Initiatives:

Participate in professional learning communities (PLCs) focused on transparent teaching methods.
Engage in workshops and institutes that provide training on transparent assignment design.

5. **Feedback and Revision:**

Collect and act on student feedback to continually improve course design and instructional methods.

Implement strategies such as the "Grade Proposal" system to encourage student self-assessment and metacognition.

Pedagogic Research and Scholarship within the STEM Disciplines

Lawson, D. (2021). Pedagogic Research and Scholarship within the STEM Disciplines.
. Newman University.

Pedagogic research
STEM education
Faculty development
Scholarly _{uc}

Example: Form a faculty learning community to discuss and implement innovative teaching strategies.

3. **Conduct Pedagogic Research:**

Situate Research in Literature: Ensure that research is connected to existing literature and aims to

Use frequent and authentic assessments to verify student mastery of learning outcomes.
Collect and reflect on student feedback to continuously improve teaching practices.

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Dewsbury, Bryan and Cynthia J. Brame. 2019. Inclusive Teaching. CBE—Life Sciences Education 18(fe2). DOI: 10.1187/cbe.19-01-0021

Inclusive teaching
STEM education
Classroom climate

