High Impact Pedagogies and Student Engagement in Learning

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Engaged student learning

High-impact strategies to enhance student achievement

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University of Southampton

https://www.heacademy.ac.uk/resource/engaged-student-learning-high-impact-strategies-enhance-student-achievement
AIM OF THE PROJECT:

To identify pedagogies that are highly effective in generating student engagement in learning within specific disciplinary contexts: A STEM Focus
Process

1. **Five search engines** (Education Research Complete; ERIC; ISI Web of Science; Psych INFO; and Scopus).

2. Data base: ‘**Sharing Higher Education Database**’ (SHED) (Evans, 2014a) (catalogue of 44 relevant higher education journals, associations, and networks focused on teaching and learning in higher education).

3. **Snowballing** from existing references.

4. **Breadth** ensured in coverage of relevant search terms related to pedagogy and student engagement.
Student Engagement Words

pngspeedofcreativity.org
Immediate or long term gains?

What does active in learning mean? Meaningful vs meaningless tasks

Basic entry level vs Students offering ideas and supporting the learning of others?

How does curriculum enable autonomy? Role of learner in maximising opportunities

Importance of supporting transitions; openness of students to new experiences

Student Engagement Model · gifattendengageinvest.wordpress.com
Defining Engagement in learning: Continuums: What Pedagogy?

Active v Passive judgements
Continuou... selected attention
Compliance........developing rules
Holistic involvement ......parachutist
Immediate ................................ longer term learning outcomes
Inward focus......................................outward focus
Own development..........................development of others
Using resources.............................creating resources
Making use of knowledge................creating knowledge
Reflective............................................Transformative
What dimensions of engagement are we promoting?

**Student generation of content**
- Student producers of resources
- Student producers of research
- Completion of tasks

**As partners**
- Entrepreneurial capacity
- Civic competence

**REQUIRING**
- Management of information: filtering skills
- Feedback-seeking and using skills
- Emotional regulation
- Resilience – persistence and adaptability
- Creativity-generating
- Self-assessment
- Flexibility
- Resourcefulness; offering solutions
- Independent thinking
- Organisation
- Willingness to Offer
Search Terms

Search terms

**Pedagogy** (OR teaching OR teaching and learning OR discipline specific teaching and learning OR curriculum OR teaching methods OR teaching approaches OR (high impact) pedagogy OR signature pedagogy(ies) OR disciplinary pedagogies OR educational practices OR assessment OR high impact educational practices);

**AND**

**Student Engagement** (OR learning task engagement OR student voice OR learning gain OR educational gain OR effectiveness OR performance OR student development OR student self-regulation OR learning transfer OR student partnerships/cooperation OR students as partners OR co-production OR deep approach to learning OR active/collaborative learning OR academic challenge); **AND**

**Higher education** (OR postsecondary OR post-compulsory OR University OR College).

Table 1: Search Terms
In addressing different interpretations of student engagement we were mindful of:

• Focusing on student engagement in the learning process.
• Single and multiple dimensional frameworks (e.g. Trowler and Trowler (2010) – engagement in individual learning; with structure and process; identity; Aitken & Sinnema, (2008) - identity, knowledge, skills, participatory; affective; Chapman (2003) – behavioural, cognitive, and affective).
• Spatial variations in emphasis (e.g. Healey et al., (2014) - students as change partners; Krause & Armitage (2014) - belonging, retention, and success).
• Temporal variations (e.g. Evans (2014) - resilience; self-regulation; Boud (2000) - sustainability; students as research partners; Carless (2011) - dialogic feedback partners; growing emphasis on social enterprise; etc.).
• Disciplinary variations in interpretation, focus, and measurement.
Filtering Process

1741 articles selected
(from 21,055 abstracts/articles reviewed)

Focused sample 372 articles
(reading and re-reading led to exclusion of 99 articles leaving 273 including 170 pedagogical interventions)

36 case studies identified (@ A Grade)

10 representative case studies
Criteria for Grading

1. Pedagogical Clarity
2. Methodological Transparency
3. Methodological Congruence
4. Evidence-based
5. Accessibility of Findings
6. Transferability
# Data Collection Sets

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1. **Score** Pedagogical Clarity
   - Pedagogical Approach
   - Key Features/Themes
   - Key Principles
   - Theoretical/Conceptual Framework
   - Has Impact been considered
   - Which aspects of Engagement are being evaluated
   - Context of Study
   - Inclusive Pedagogy

2. **Score** Methodological Transparency
   - Methodology
   - Methods of Data Collection
   - Methods of Analysis
   - Nature of Sample
   - Sample Size
   - Intervention length if relevant
   - How Effectiveness of Pedagogy Measured
   - Evidence of relationship between Engagement & Educational Outcomes

3. **Score** Methodological Congruence
   - Evidence to warrant conclusions
   - Type of evidence (direct/indirect)
   - Single/multiples evidence sources
   - Source of data (student/lecturer/other)
   - Reported outcomes
   - Accessibility of findings
   - Impact within and beyond discipline
   - Transferability Evidenced/potential
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<td>Patey, Chana; Even, Zahava; Ronk; Magovski, Mark; Stanger, Varda</td>
<td>2007</td>
<td>AN Innovative Program in Social Work Education: TLAs and the Use of Games to Teach Sociological Concepts and Critical Thinking Skills to Social Work Students. Teaching Sociology, 37(2), 111-116.</td>
<td>Teaching sociology 111-116</td>
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**Australian Educational Researcher**

**Inclusive teaching based on relational pedagogy**

Lecturers being more inclusive and open, better interactive and interpersonal openness.

Related to:**

- retention
- engagement
- confidence in track

**Generic**

Related to:**

- approach
- content

**Science**

Related to:**

- games
- critical thinking
- content

**Sociology**

Related to:**

- thinking tools
- inquiry
- content
Findings

• Vast amount of literature

• 13% of sample were of high quality across pedagogy, methodology and impact criteria (n = 273)

• Dominance of USA (46% lead authors from USA institutions) (UK 15%) (Hong Kong 2%)

• Disciplinary bias: (n = 1642) Dominance of STEM (31%); Social Sciences (29%); Arts & Humanities (10%); Health & Social Care (9%).

• Undergraduate focus (20% focused on postgraduates)

• Short interventions (75% < than one year)

• Emphasis on students’ perceptions of learning (35% looked at some measure of performance)
Strongest Pedagogical Designs

• Theoretical underpinnings of pedagogy supported the specific purposes of the learning.

• Critical rather than descriptive pedagogies.

• Explicit learning goals.

• Engaging the learner in dialogue about learning.

• Sensitive to but not limited by nested nature of pedagogy.
STEM Patterns

- 28% of focused sample were from STEM (n = 78); of these 78 - eighteen articles (23%) were judged to be of high quality (7% of total sample).

- Dominant Pedagogical approaches: strong focus on curriculum content in driving pedagogy, with an emphasis on collaborative, active, and experiential approaches.

- Key Foci: visual representations; co-operative learning; inquiry including simulations; problem/project based learning; students as producers/co-assessors, and self-assessors.
STEM Pedagogies

• Active experiential pedagogical approaches
• Importance of making individual students feel *valued in large groups*
• Value of problem-based, work-based, design-based learning
• Authenticity is operationalised through using life-like examples
• *Gamification* approaches are favoured to enable authentic and team-based approaches
• Genuine problem solving and community engagement
• Students as researchers
• Worked examples and visuals
The Nested Nature of Pedagogy
Core Principles of Effective Pedagogies

- Accessibility – universal design stance
- Authenticity - real world – meaningful products – student as producers
- Agency
- Criticality
- Flexibility
- Manageability
- Sensitive to needs of context and specific discipline requirements
- Learner - centred
Discussion

- Enriched versus impoverished models of student engagement.
- Individual vs multiple dimensional frameworks.
- Engagement in learning vs wider involvement in strategy.
- What do we value?

What is engaged in 21st century learning environments?
21st Century Engagement in Learning

• Students as change and research partners
• Students as self-regulators
• Students as self- and co-assessors
• Student engagement beyond the University – post course consciousness
Post-Course Design

“paying attention to such elements as prior learning and prior conceptions, experiential knowledge, program-wide learning goals, and the long view of expert practice. There are also many ways to create assignments (and reflections to go with assignments) that gesture beyond the course itself—to life experience, to other courses, or to larger communities of practice...” (Bass, 2012, pp. 26, 27).

Assessment Principles


http://rer.sagepub.com/content/83/1/70.full.pdf+html
Appropriate Assessment: The Evidence

- Explicit guidance
- Appropriate, timely, and sustainable assessment
- Focused questioning – what is the correct question? (JIT)
- Using technology to facilitate real time feedback
- Feeding up – translation into practice
- Self- and co-assessment
- Peer engagement
- Authentic and meaningful assessment - quality projects
- Assessment geared to supporting collaboration over competition
- Students as producers
- Assessment alignment (21st century learning needs)
- Appropriate diversification of assessment and sensitivity to student needs
High Impact Pedagogies: Issues

- Nature of the relationship between student engagement and outcomes (and which outcomes)?
- Student and lecturer perceptions of engagement.
- What counts as knowledge?
- Student rights perspective – freedom to learn.
- What are meaningful learning gains and are they quantifiable?
- Where are the opportunities to integrate, synthesize, and apply knowledge? (Kuh, 2008)
- Valuing what we can measure rather than measuring what we value?
Recommendations

- Research-informed pedagogies
- Discipline specific approaches – signature pedagogies articulated
- Greater transparency in reporting of pedagogies
- Greater explication of the role of the student in the learning process
- Need for critical pedagogies
- Importance of considering how individual differences are attended to
- Assessment practice is the LYNCHPIN – it needs to keep pace with 21st century requirements
Finally...

... in moving engagement agendas forward students and lecturers need agreement on what meaningful and quality learning experiences are ... The freedom to learn, to have opportunities to connect in being able to take disciplinary understandings forward and being able to apply and offer them to workplace and other contexts as co-partners and producers are key concerns in developing students as partners within higher education within 21st century learning environments.

http://www.amazon.co.uk/Understanding-Pedagogy-Developing-critical-approach/dp/041557174X
Thank you for listening
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Seminar on Higher Education High Impact Pedagogies
7 September 2016 at University of Southampton
Higher Education Pedagogies

The aim of *Higher Education Pedagogies* is to identify, promote and publish excellence and innovations in the practice and theory of teaching and learning in and across all disciplines in higher education. The journal will provide an international forum for the sharing, dissemination and discussion of research, experience and perspectives across a wide range of teaching and learning issues. The journal will prove a valuable resource for individuals in the development and enhancement of their own practice, and for institutions in the promotion of the scholarship of teaching and learning.

*Higher Education Pedagogies* will focus on disciplinary pedagogies and learning experiences; the higher education curriculum, i.e. what is taught and how it is developed and enhanced including both skills and knowledge; the delivery of the higher education curriculum; how it is taught and how students learn, and academic development; the role of teaching and learning in the development of academic careers and its place within the profession.

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