

# **Leading Learning & Teaching:**

*What does research tell us about engaging university students?*

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# Outline

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- What do we know about learning and teaching?
  - What does research on L&T offer?
  - What is known about UoW students
  - Plan for intervention and change
  - Aligning change & intervention at the dept level with disciplinary vision and UoW strategic directions.
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# The Best & the Worst

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Recall your own university education

- What was one of the best learning experiences you had?
- What were contributing factors?

Recall your worst learning experience?

- What were contributing factors?
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# Consistently this exercise has demonstrated that:

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- ❑ Clear communication of expectations expected is important
  - ❑ Support in developing the capacities to learn effectively and to carry out the expected activities is important
  - ❑ Challenge make it feel worthwhile
  - ❑ Relevance to real world issues is a strong motivator
  - ❑ Student to Student engagement is important
  - ❑ Student teacher conversation is important
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# If our own experiences tell us such consistent information why research Learning and Teaching?

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- Theory and practice are parts of a whole! Each critiques the other!
- Experience does not necessarily equate with expertise
- Practice making practice risks entrenching erroneous thinking

(Britzman 2003)

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# Teachers pedagogical content knowledge is valuable (Schulman 1987)

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What knowledge guides teachers.

- Tacit PCK knowledge
  - Distinguishes an expert in the domain from the expert who can teach the domain
  - Knowing how to teach a particular concept or process
    - What challenges students might face in conceptualisation or achieving mastery
    - Includes strategies that address potential learning problems
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# What Research has Found

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It is the assessment tasks and their management that most determine the quality of the student learning experience and the educational integrity of the learning outcomes.

(Schmeck 1987, Biggs 1992)

- Assessment and feedback during the course of learning are the most effective way for students to learn what is expected of them and accountability in their work and personal lives. (Wormeli, 2006)
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# Students Engage Best When:

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- They understand clearly what is expected
  - Perceive that the learning required is relevant to their long term goals and learning outcomes that are authentic to their long term intentions.
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# The Importance of Teacher Expectations

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- Students learning best when academics have high expectations of them

and

- at the same time ensure that students are supported in the processes of learning
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# Design courses that address potential student special needs

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Designing assessment and learning to meet all students learning needs rather than **reverse engineering** curricular to cater for particular individuals is more effective in achieving high quality outcomes, more efficient practice and quality educational outcomes.

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# Standards of Instruction

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Newman and Wehlage's (1993) research has identified five standards or benchmarks of education that support the development of capacities & achievements that any study at universities ought to engender, namely:

- ❑ Higher order thinking
- ❑ Depth of knowledge
- ❑ Connectedness to the real world
- ❑ Substantive conversation between students and between students and their teachers
- ❑ Social support for student achievements.

But it had already been established that by Grant & Givens Fisher that university teachers rarely model reasoning beyond the lowest level of thinking.

(Florida Taxonomy of Learning attainment (Grant & Givens Fisher, 1982))

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# Learning is Developmental

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- Cognitive development
  - Psychomotor Skills development
  - Ethical Moral Reasoning development
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# Cognitive Development

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- Knowing
  - Understanding
  - Analysis
  - Application
  - Synthesis
  - Evaluation (Bloom 1957)
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# "Qualitative Taxonomy for Grading Students' Performance" Biggs(1992)

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- **Pre-structural**– irrelevant or incorrect learning
  - **Uni-structural**– understanding of a few basic ideas (retelling)
  - **Multi-structural**– understanding and coverage of a number of aspects of the topic but little integration or transformation (encyclopedic)
  - **Relational**– ideas cohere
    - using selectivity and judgement
    - using the appropriate language of the discipline and – can use in novel contexts
  - **Extended Abstract**– high level of abstract thinking
    - original
    - ideas generalized and applied to new contexts
    - ideas drawn to conclusions
    - highly reflective
    - sharply perceived
    - generalized from personal experience
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# Psycho-motor Skill Development

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- ❑ Complex tasks need to be viewed as a whole and then disaggregated
  - ❑ Mastery learning is most appropriate
  - ❑ Requires practice with feedback
  - ❑ Modelling and reciprocal teaching strategies are effective (Anderson 1987)
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# Ethico-Moral Reasoning Development (Perry 1999)

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## □ Dualism

- Black and white simplicity
- Absolute truths given by an authority figure

## □ Multiplicity

- Recognition of uncertainty
- Temporary condition
- Leads to ultimate truth from authority

## □ Relativism

- All views are valued equally with the limits of a standard.
- No one true interpretation
- Reserves the principle of right and wrong

## □ Commitment

- Makes choices using standards
- Examines the impact and implications of commitments
- Sees them as trade offs

## □ Limited Commitment

- Part of human growth
  - Making commitments and reflecting on them and modifying them in the light of experience.
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# Teaching First Years Students

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- Relevance and fragility of knowledge
  - How facts become facts in the discipline
  - How experts in the discipline proceed.
  - The culture and ethos of the discipline
  - How to learn
  - Developing students meta-cognitive ability
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# Teaching Final Year Students

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- complexity
  - application
  - ambiguity
  - commitment to ideas
  - authenticity
  - collaboration
  - evaluation
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# Objectives of the Senior Year

## Experience (Gardiner: *The Senior Year Experience. About Campus*,

March/April 1999

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- ❑ Promote coherence and relevance.
  - ❑ Promote integration and connections between general education and major
  - ❑ Foster integration and synthesis within academic majors.
  - ❑ Promote meaningful connections between general education, the academic major and career experiences.
  - ❑ Explicitly and intentionally develop important student skills, competencies, and perspectives that are tacitly or incidentally developed in the college curriculum.
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# Objectives of the Senior Year Experience

(Gardiner: *The Senior Year Experience*. *About Campus*,

March/April 1999

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- Enhance awareness of and support for key personal adjustments encountered by seniors during their transition from college to post-college life.
  - Improve seniors' career preparation and pre-professional development.
  - Enhance seniors' preparation and prospects for postgraduate education.
  - Promote effective life planning and decision making with respect to practical issues likely to be encountered in adult life after college.
  - Encourage a sense of unity and community among the senior class, which can serve as a foundation for later alumni networking and future alumni support for the college.
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# Qualities of Good Teaching (Feldman, 1988)

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- ❑ The teacher's sensitivity to and concern with class level and progress
- ❑ The teacher's preparation and organisation of the course
- ❑ The teacher's knowledge of the subject
- ❑ The teacher's enthusiasm (for subject or for teaching)
- ❑ The teacher's clarity and communication
- ❑ The teacher's availability and helpfulness
- ❑ The teacher's fairness and impartiality in student assessment
- ❑ The quality of exams & other assessments

# Qualities of Good Teaching Sherman, 1987

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- ❑ **Enthusiasm** (vocal delivery that is lively and varied; high energy level; pleasure in teaching; love of the subject; deep interest in the subject)
  - ❑ **Clarity** (clear explanation of concepts; comprehensibility; summarising of major premises; systematic presentation of material)
  - ❑ **Preparation and organisation** (detailed course outlines; establishment of course objectives; preparation for each class session; definition of evaluation procedures)
  - ❑ **Stimulation** (creation of interest and thoughtfulness in students; inspiration of intellectual curiosity in students; ability to be interesting; motivating; thought provoking)
  - ❑ **Knowledge** (grasp of subject matter; ability to make interrelationships of knowledge areas clear).
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# Differences between Academics and Students

(Theall (1990))

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Faculty and students were very similar in their views of what constitutes good teaching, although differences in the relative importance of a few characteristics were evident

- Students in these studies placed somewhat more emphasis than Faculty did on **teachers' stimulation of interest** and on elocutionary skills.
  - Faculty gave more importance than students did to teachers' being **intellectually challenging, encouraging independent thought**, and motivating students to do their best.
  - Both groups also mentioned the teacher's **concern and respect for students**; the nature and value of course material; the quality and frequency of feedback to students; and the teacher's openness to opinions of others, along with his or her encouragement of questions and discussion.
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# Feedback Research

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- Students largely perceive that they have inadequate feedback
  - Students don't understand the feedback
  - Students don't use the feedback
  - Students are not required to use feedback
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# Harvard University 1<sup>st</sup> Yr Statistics

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- 4% success for non-traditional 1<sup>st</sup> yrs (NTS)
  - 80% success for traditional students (TS)
  - Study found that TS
    - Studied with peers in groups
    - Had people at home to check homework
    - Worked through old exam papers
  - Study found that NTS thought that asking others for advice was cheating, were loners.
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# Solution

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- Redesigned courses to:
    - Included group work as class structure
    - Required all students to get their homework checked
    - Worked through old exam papers in class
  - Pass rate of NTS rose to 66%.
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# Biology

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	Succeeded	
SBB*	25	8
	5	18
	Failed	
Studied biology before*		

# Aspects of Leadership and Management.

Kotter's (1990)

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- Leadership:
    - (1) establishing a vision,
    - (2) aligning stakeholders,
    - (3) motivating and inspiring.
  - Management:
    - (1) planning and budgeting,
    - (2) organising and staffing,
    - (3) controlling and problem solving.
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# Academic Leadership and Management of Learning & Teaching

(Marshall, Orrell, Thomas, Cameron and Bosaquet (2008))

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## 4 Domains

Students

Staffs

Curriculum

Enablers

## Leadership

Vision/goal setting

Motivating

Enabling

## Management

Budgets

Resource provision

Capability

enhancement

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# Reflection: *What concerns you about student learning in your department?*

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- ❑ What would you like to see changed?
  - ❑ ***What questions would you need to ask to find out what existing research can already provide answers?***
  - ❑ What **vision** do you have about this factor? If it was NOT a problem, what would be different? How would you be able to observe it?
  - ❑ What might hinder or challenge your efforts to achieve that vision?
  - ❑ What strategies might assist you to gain department support for your vision?
  - ❑ What might motivate staff or students to engage with your vision?
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