

**Designing Curriculum in the Age of Diversity:
Helping Students Becoming the Best Possible
Version of Themselves**

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Agenda


- The shifting reality of higher education
- Curriculum design
- The big picture
- The education of adults
- Recommendations

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The shifting reality in higher education

Today, universities are accepting bigger and more diverse cohorts

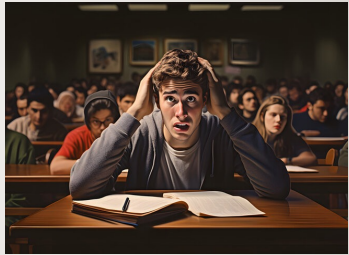



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The shifting reality in higher education

More diverse students means more opportunities, but also more challenges

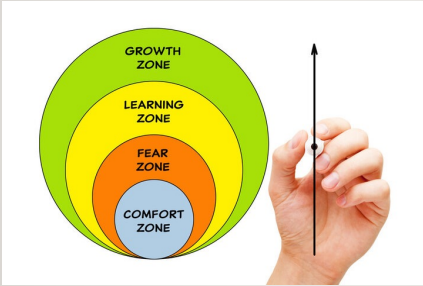


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The shifting reality in higher education

Studying at university is challenging, because learning is challenging




"Ignorance and incompetence are pre-requisites for learning"

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The shifting reality in higher education

To make things worse, we are now educating "Generation Z". Some of whom are:



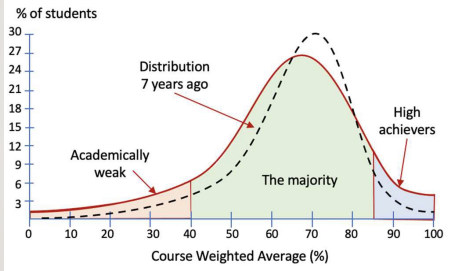
- Entitled
- Technology savvy
- Easily distracted
- Difficult to motivate
- Good at finding information
- Not so good at using it
- Overprotected
- Unable to deal with adversity

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The shifting reality in higher education

All this has resulted on a shift in the performance distribution curve



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The shifting reality in higher education

In late XX Century the role of universities shifted from

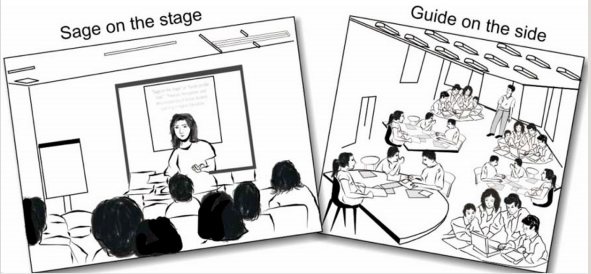



Image credit: sharvutsof.com

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The shifting reality in higher education

...then Covid hit, and another shift was forced onto universities



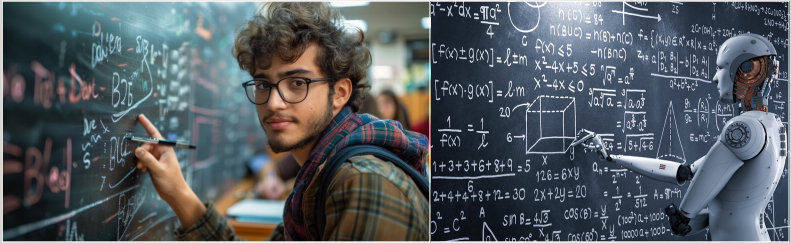
https://chessonline.co.uk/shop/loads/blog_post/11/online-learning-vs-face-to-face-learning.com

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The shifting reality in higher education

... and now we have to deal with the challenges brought about by AI.



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Curriculum design

How to design curriculum for such moving target?

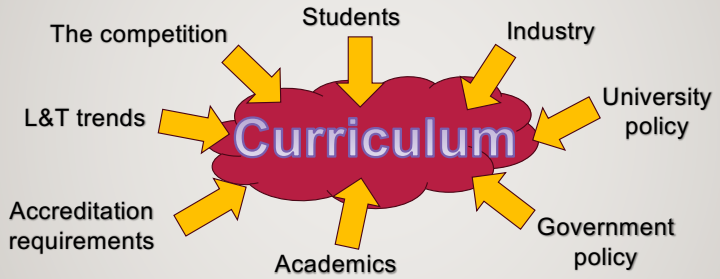


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Curriculum design

Curriculum today must address many requirements and needs



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Curriculum design

What do we want students to learn?

- Discipline knowledge
- Professional skills
- Personal skills
- Life-long learning skills

While our institutions:

- Keep climbing the ranks
- Protect their reputation
- Remain financially viable




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Curriculum design

The big picture

An alternative way is to see the mission of universities as institutions that facilitate the students' transition from pre-adults to functional adults.



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Curriculum design

Growing happens in a spectrum



- Freedom
- Opportunities
- Emotional stability
- Financial independence
- Maturity
- Happiness
- Responsibilities
- Ability to commit

Common denominator: The need to learn

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Curriculum design

What is learning?

noun

- 1 the act or process of acquiring knowledge or skill:
Students exhibit a clear love of learning, enjoying the relationships they have with their teachers.
- 2 knowledge acquired by systematic study in any field of scholarly application:
She enjoys showing off her learning to her parents.
- 3 **Psychology:** the modification of behavior through practice, training, or experience.
- 4 Usually **learnings**, something that is learned through education or experience:
Parents can help set up expectations, nurture curiosity, cultivate discipline, and reinforce learnings.

Source: [Dictionary.com](https://www.dictionary.com)

Education
The change of behaviour through learning.

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Information vs Knowledge

information: knowledge:

WIKIPEDIA Google YouTube

Not the same

@gapingvoid

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How we learn

All intellectual endeavour can be reduced to two simple activities:

Identify and Connect

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Activity

Make a list of all the things you can recall when you see the following pieces of information

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Activity

Make a list of all the things you can recall when you see the following pieces of information

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Activity

Make a list of all the things you can recall when you see the following pieces of information

$$dU = TdS - PdV \implies \left(\frac{\partial T}{\partial V}\right)_S = -\left(\frac{\partial P}{\partial S}\right)_V$$

$$dA = -SdT - PdV \implies \left(\frac{\partial S}{\partial V}\right)_T = \left(\frac{\partial P}{\partial T}\right)_V$$


$$dH = TdS + VdP \implies \left(\frac{\partial T}{\partial P}\right)_S = \left(\frac{\partial V}{\partial S}\right)_P$$

$$dG = -SdT + VdP \implies -\left(\frac{\partial S}{\partial P}\right)_T = \left(\frac{\partial V}{\partial T}\right)_P$$



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Identify and Connect

- We all do. We can't help it. It is the way the brain works.
- The difference between an **expert** and a **novice** is the number of things (knowledge, ideas, concepts, pictures, equations, consequences, challenges, opportunities, etc.) they can recall and connect when faced with a given situation.
- Being aware that we are doing it, bringing it to the conscious level, improves the way we learn.



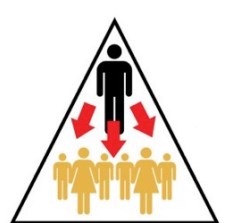
Source: ps.psu.edu/learninglab/2007/04/01/



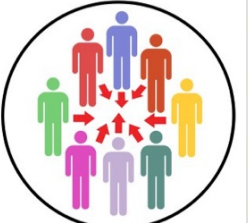
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The education of adults

Teenagers and adults have different needs and expectations about their education




Pedagogy



Andragogy


Image credit: www.uconn.edu/adults/



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The education of adults


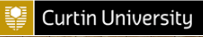
Characteristics	Pedagogy	Andragogy
The understanding of education	Process of transmitting what is known	Lifelong process of continuing inquiry
Education conducted...	...from above	...between equals
Teacher's role	Transmission of information	Helping learners learn
Learner's role	Assimilate the content delivered by teacher	Active participation in the learning process
Learner's personality	Dependent	Independent
Responsibility for what and how to learn	Teachers	Teachers and learners
The role of learner's experience	Irrelevant	Crucial (fundamental)
Learners readiness to learn	When others say they ought to learn	When they have a need to learn
Motivation to learn	Mainly extrinsic	Mainly intrinsic
Responsibility for results of education	Mainly teacher's	Mainly learner's
Primary techniques in education	Transmittal (Lectures, readings, presentations)	Experiential (labs, discussion, simulations)
Learning programs organisation	Fairly standardised curriculum	Around life-application categories
Learners' orientation to learning	Subject-centred	Problem-centred
Goal of learning	Pass the course	Adopt behaviours and competences



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Challenges faced to shift the paradigm

<p>For teachers</p> <ul style="list-style-type: none"> • Most of us were educated in a very pedagogical system. • Emphasis was put on contents, not on abilities. • We learned how to learn on our own. • We are just repeating the pattern, after all it worked! Didn't it? 	<p>For students</p> <ul style="list-style-type: none"> • The school system does not help them develop their thinking/learning skills. • Social media and society are feeding them with wrong ideas about themselves and what they should expect from life. • They are growing in a world different to the one in which we grew up.
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A fresh approach to curriculum design:

Shift the focus from

What you want them to learn
to
What you want them to become


The Engineering Foundation Year motto at Curtin University:
"Engineering is not something you do, it is something you become"






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Recommendations

Be mindful of students' needs and expectations.









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Recommendations

Be intentional in helping students transitioning from teenagers to fully functional adults.
How do we achieve this? By treating them like adults:

- Let them take responsibilities
- Teach them to accept the consequences of their decisions







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Recommendations

Let students know the expectations and why we do what we do.

"Your only job is to become the best version of yourself"




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Recommendations

Be a role model. Be the adult you want them to become.

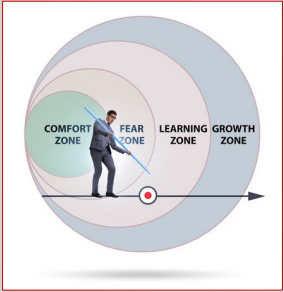


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Recommendations

Dare to step out of your comfort zone. Take advantage of the world we live in.



- Infinite access to information.
- Technology to simplify your life: Apps and tools.
- AI. See it as an ally, not the enemy.
- Try something different in your practice.
- Stay informed of advances in higher education.

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Final thoughts

Heutagogy = Life-long learning

Your greatest achievement as an educator will be when your students do not need you anymore to keep learning.

Help students become self-regulated learners.



Image credit: isrspace.com

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