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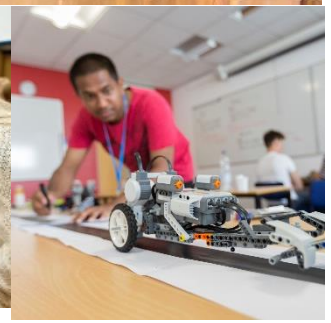
How can Higher Education Outreach Raise Attainment in Schools?



25 January 2024

David Dobraszczyk
Lecturer in Education, University of Reading

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NERUPI Convenor

Unpicking attainment

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Intelligence(s), circumstances, and inequalities

Key questions:

- **What are the key determinants/factors in attainment?**
- **What is it, fundamentally, that we are trying to achieve?**
- **What aims do you have in your specific context?**

He's a genius!

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Johannes Mozart

Age of 5 composing pieces written down by his father

Father: Leopold Mozart

- **Composer**
- **Conductor**
- **Experienced music teacher**
- **Violinist**

Resource differences and collective efforts and investments made or not within families become translated into individual 'ability'.....

(Ball 2010, p.162).

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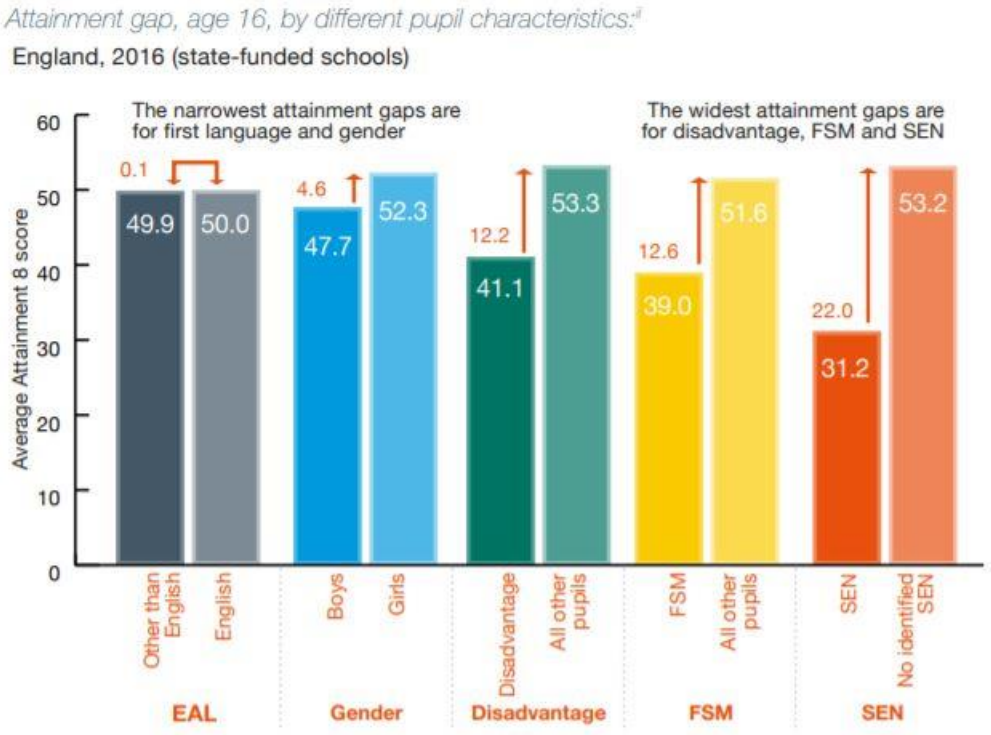
In 2021 the OfS announced that one of its priorities for higher education is '*to partner with schools and other local organisations to raise the attainment of young people*'.



ii. GCSE and equivalent results: 2015 to 2016 (provisional)', Department for Education (October 2016)
iii. 'Special educational needs in England', Department for Education (January 2017)

Attainment and Progression

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Grades at GCSE are most important factor in progressing to HE

Report
The link between secondary school characteristics and university participation and outcomes
Crawford et al 2014 DfE

Attainment has been shown to play a central role in increasing access, with GCSE attainment the key indicator of participation in higher education (Gorard and Smith, 2007).

Social Class and Education

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- **Resistance (Willis 1977)**
- Differentiation-polarisation (Hammersley 1990)
- **Habitus (Bourdieu 1977)**
- Restricted/elaborated code (Bernstein 1971)
- Expectations (Archer 2010)
- Knowing limits (Archer and Yamashita 2003)
- **'Fitting in' (Reay 2010)**

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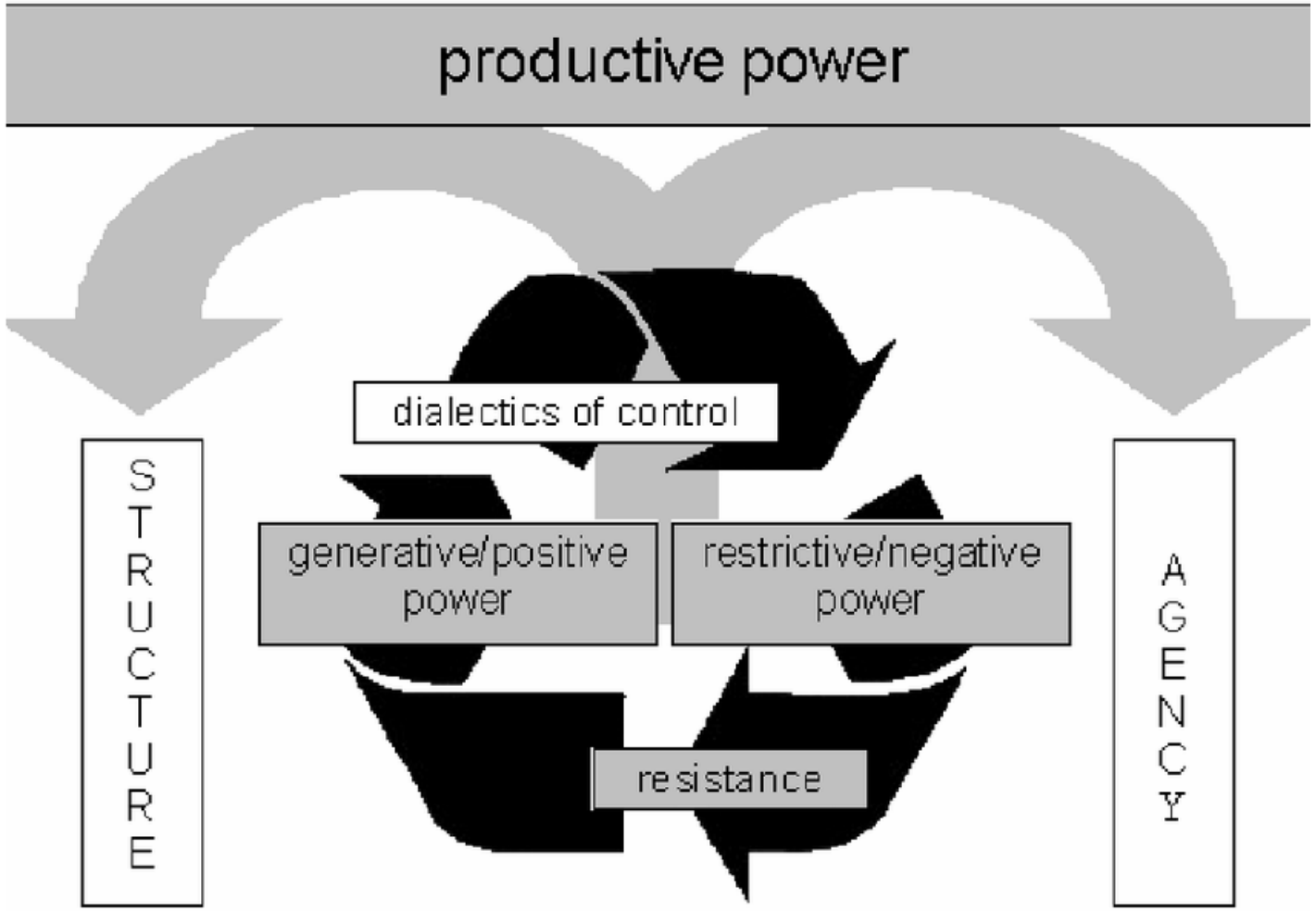

Are we free or are we restricted?

Class, gender, race

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Put your thoughts in the chat

Key questions:

1. What is it, fundamentally, that we are trying to achieve?
2. What aims do you have in your specific context?

Evidence and Impact

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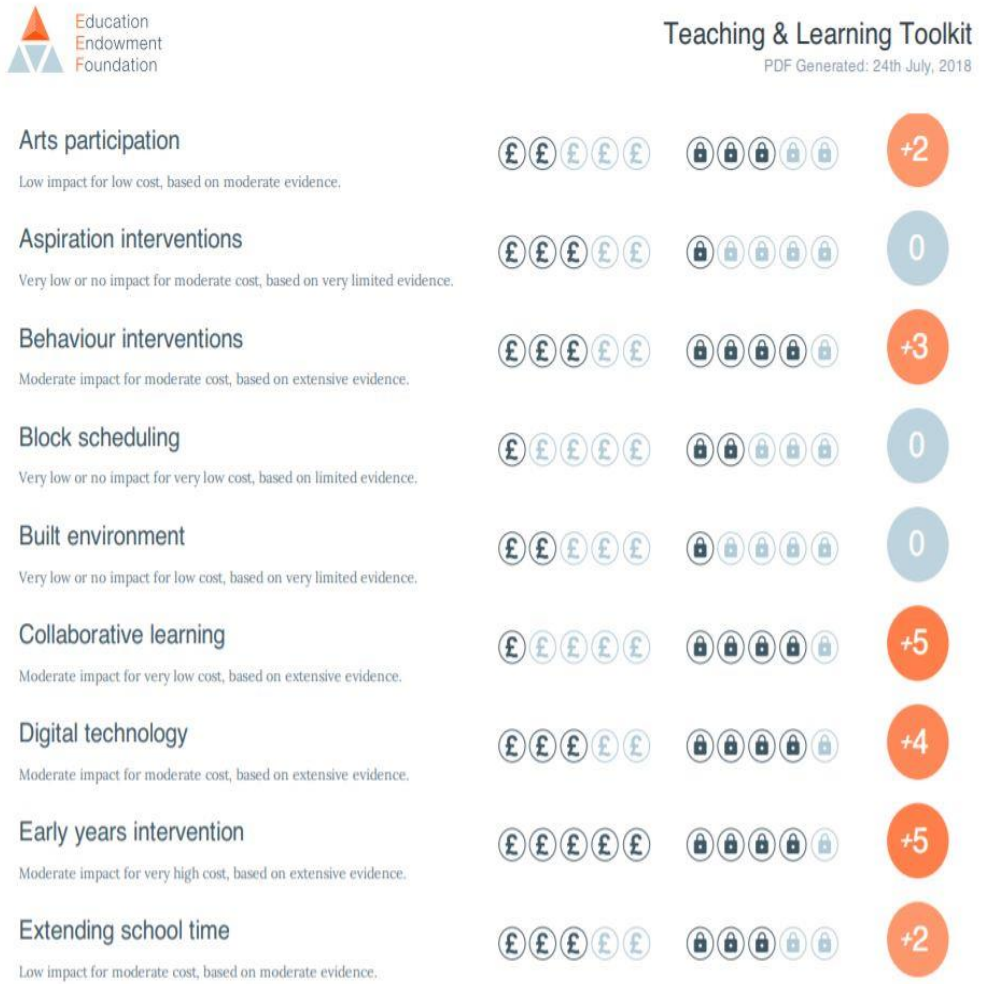

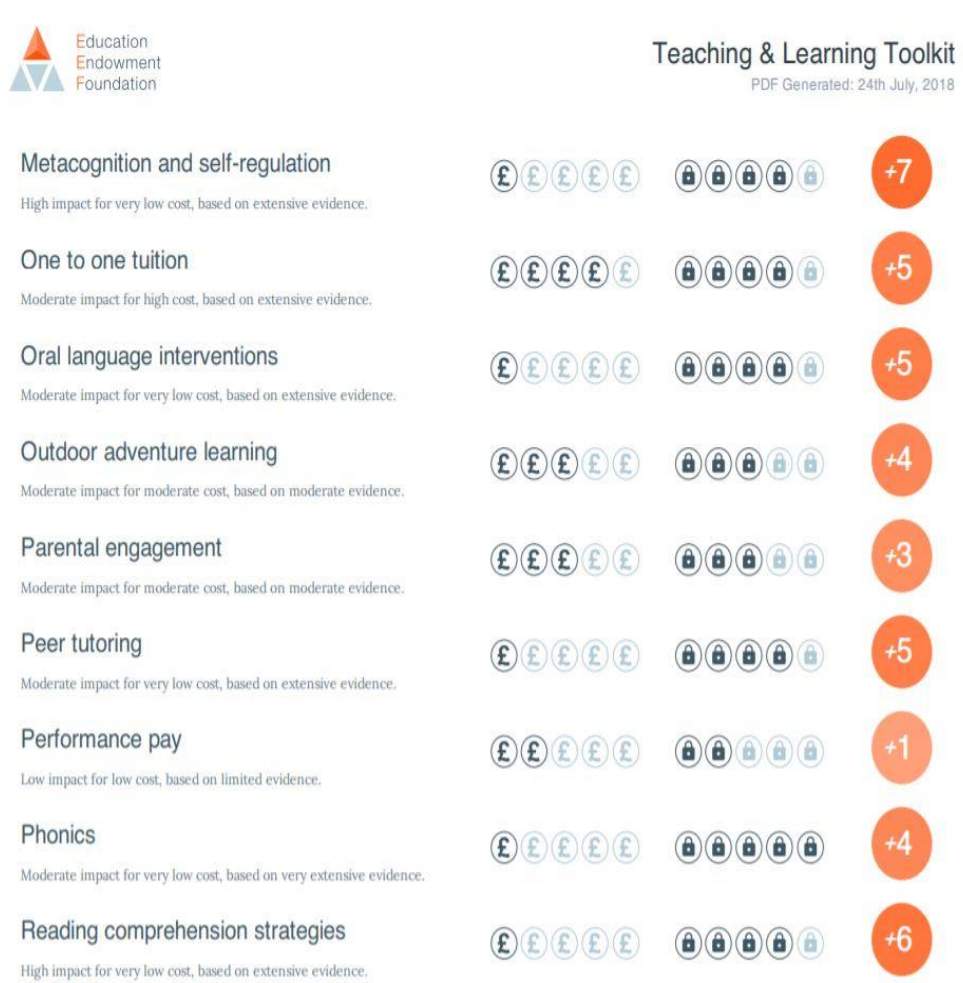

Dimensions of engagement and motivation

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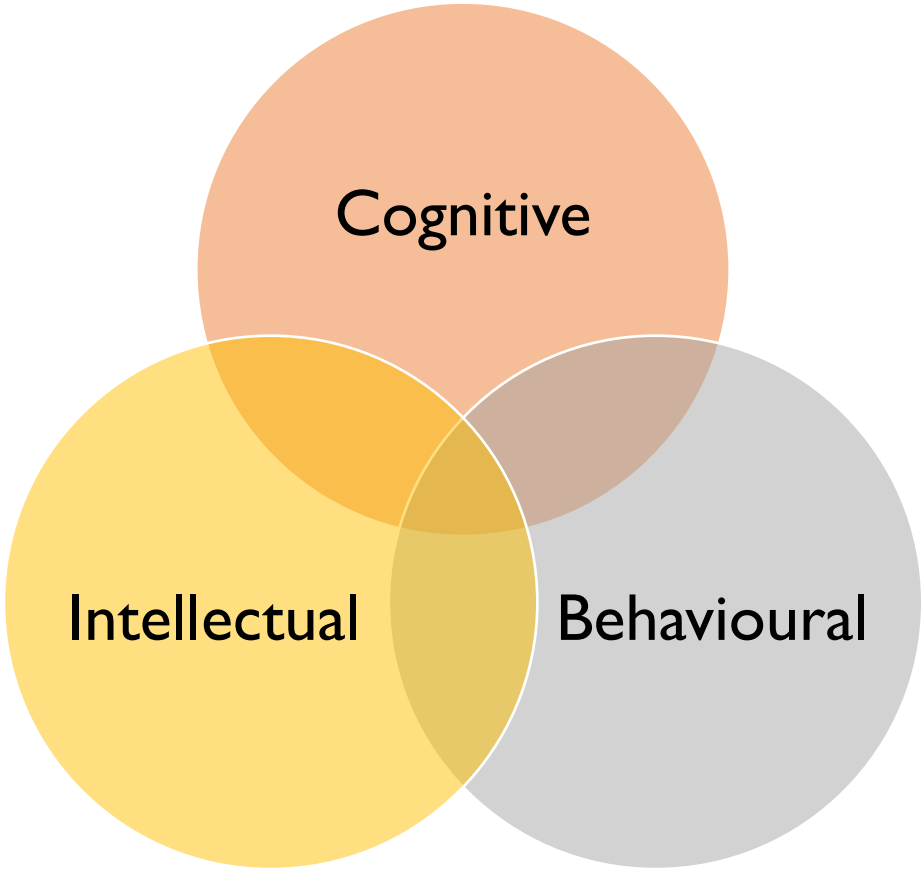

Internal/intrinsic

External/extrinsic

(van Rooij, Jansen, van de Grift, 2016; Hood 2019)

TASO Transforming Access and Student Outcomes in Higher Education

MOAT

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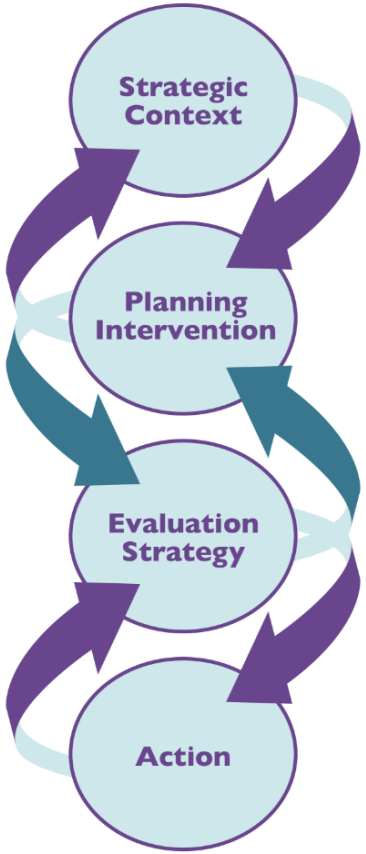

Increased knowledge on the benefits of HE	A student's understanding and awareness of the advantages and opportunities that come with pursuing higher education	Increased knowledge of the HE experience	A student's understanding and awareness of the various aspects of the HE experience, beyond the academic curriculum. This includes knowledge of the social and cultural aspects of university life, such as extracurricular activities, campus events, and student organisations
Increased knowledge of course choice available at HE	A student's understanding and awareness of the range of academic courses and programmes available to them at higher education providers	Increased knowledge of HE financial support available	A student's understanding and awareness of the various financial resources and support available to help finance their higher education
Increased confidence in future success (non-HE)	A student's belief in their ability to achieve their goals and succeed in their chosen career or life path without necessarily pursuing higher education	Increased motivation	A student's level of interest, enthusiasm, and drive to pursue and succeed in their educational endeavors
Increased wellbeing	The ability of an individual to fully exercise their cognitive, emotional, physical and social powers, leading to flourishing.	Increased grit / resilience	A student's belief that they can overcome setbacks and barriers in the learning process

Education Endowment Foundation

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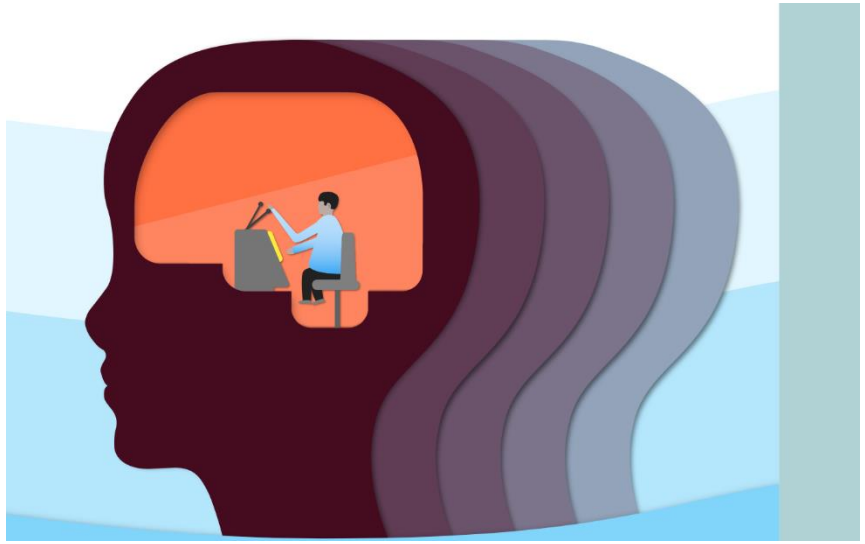
METACOGNITION AND SELF-REGULATED LEARNING

Guidance Report



How should teachers teach metacognitive strategies?

- some benefit to introducing pupils to the general principles in particular evaluating
- but evidence suggests that they are best taught through subject content.

Seven-step model applicable to different subject content at different phases

- Activating prior knowledge
- Explicit strategy instruction
- Modelling of learned strategy
- Memorisation of strategy
- Guided practice
- Independent practice
- Structured reflection

12 Principles of Modern Learning

Modern Inquiry Learning

Principle	Reality	Opportunity
 COMPILE	The ability to save and retrieve information in a variety of formats…	gives modern learners virtually unlimited capacity to store and retrieve information.
 CONTRIBUTE	The ability to participate in more complex projects…	enables modern learners to participate in more complex projects.
 COMBINE	The ability to reuse and build upon the work of others…	enables modern learners to move beyond individual and isolated projects.
 CHANGE	The abilty to quickly obtain feedback from multiple sources…	enables modern learners to continuously improve current work.

Modern Self Directed Learning

Principle	Reality	Opportunity
 CORRELATE	The ability to generate large amounts of data about our technology-based activities…	enables modern learners to use self generated data to assess and make decisions on future actions.
 COMPARE	The ability to view the learning artifacts of others…	enables modern learners to learn from what other learners are doing or have done.
 CATCH	The ability to participate in virally amplified online activities and events…	enables modern learners to easily identify new and important ideas and content.
 COOPERATE	The ability to learn in the same communities as experts and professionals…	enables modern learners to make better decisions about their own learning.

Modern Social Learning

Principle	Reality	Opportunity
 CONNECTING	The ability to access high quality content whenever and in whatever format needed…	enables modern learners to draw upon a diverse range of external resources.
 COMMUNICATING	The ability to publish using a variety of media for low or no cost…	enables modern learners to share their ideas and get feedback from others.
 COLLABORATING	The ability to form learning networks…	enables modern learners to contrast ideas and experiences with other learners.
 LEARNING COLLECTIVELY	The ability to form higly interconnected groups around an object of interest…	enables modern learners to engage in shared meaning making.

Pedagogy and Curriculum

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Principles and processes for learning and engagement

Key questions:

- **What types of learning, knowledge, and skills are important?**
- **How are they best developed?**

Do we need a rethink?

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(Dr Mary Bousted – Joint General Secretary National Education Union)
https://www.youtube.com/watch?v=UQj6j9MHjJY

Key points

#The curriculum is becoming too narrow and academically focused

#Teaching focuses too heavily on memorisation and assessment

#Other leading OECD countries are taking a different direction

#The future is about applied knowledge, interdisciplinary knowledge, and skills development

"Educational success is no longer about reproducing content knowledge, but about extrapolating from what we know and applying that knowledge creatively in novel situations" (Schleicher – OECD, 2018)

- **Should WP be engaging with the present or looking to the future?**
- **Should WP be focused on supporting attainment or a broader conceptualisation of educational outcomes?**

Curriculum

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Surgery students 'losing dexterity to stitch patients'

It is a concern of mine and my scientific colleagues that whereas in the past you could make the assumption that students would leave school able to do certain practical things - cutting things out, making things - that is no longer the case, says Prof Roger Kneebone

https://www.bbc.co.uk/news/education-46019429

A model of student learning

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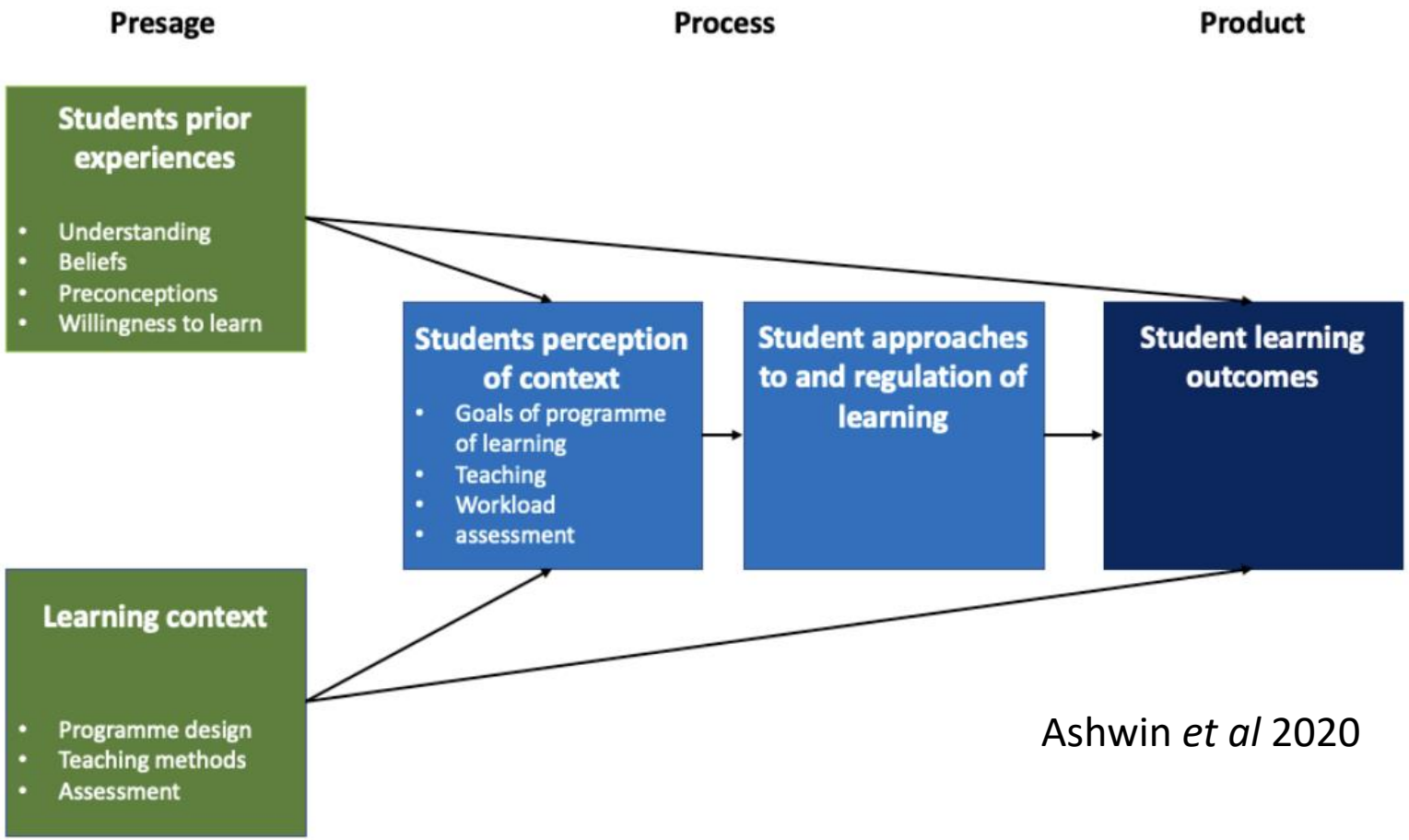
https://www.nerupi.co.uk/members/resources/a-model-of-student-learning



Ashwin *et al* 2020

https://www.nerupi.co.uk/members/toolkit/basics/theory-of-change

The NERUPI Framework

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SOCIAL AND ACADEMIC CAPITAL		HABITUS	SKILLS CAPITAL	INTELLECTUAL & SUBJECT CAPITAL
PROGRESSION CURRICULUM		STUDENT IDENTITIES	SKILLS CURRICULUM	KNOWLEDGE CURRICULUM
KNOW	CHOOSE	BECOME	PRACTISE	UNDERSTAND
Develop students' knowledge and awareness of the benefits of higher education & graduate employment	Develop students' capacity to navigate Higher Education sector and make informed choices	Develop students' confidence and resilience to negotiate the challenges of university life	Develop students' study skills and capacity for academic attainment	Develop students' understanding by contextualising subject knowledge





		PRESAGE	PROCESS	OUTCOME
			Outreach	
INTELLECTUAL & SKILLS CAPITAL	CURRICULA & PEDAGOGICAL SPACES	School curriculum based on GCSEs with academic focus. Parents & social networks may not be able to provide academic support Engagement adversely affected Public examination outcomes differentials		
		School ethos likely to reflect white, m/c values Use of innovative pedagogies challenging as assessment largely based on formal examinations Ofsted: teachers to avoid teaching only to the exam and develop 'cultural capital' but assessment system unchanged.		
HABITUS	INSTITUTIONAL CULTURE & VALUES	School ethos likely to reflect white, m/c values Student/staff relationships can be problematic Students not fully engaged, may become disaffected Cultural isolation increases challenge of developing positive student identities May withdraw or forgo opportunities		

Metacognition or self-regulated learning

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Metacognitive activities can enable pupils to:

1. Identify what they already know
2. Articulate what they learned
3. Communicate knowledge, skills & abilities to a specific audience
4. Set goals and monitor their progress
5. Evaluate and revise their own work
6. Identify and implement effective learning strategies
7. Transfer learning from one context to another

Metacognition and self-regulation approaches aim to help pupils think about their own learning more explicitly,. The Education Endowment Toolkit found that metacognition and self-regulation approaches have consistently high levels of impact, with pupils making an average of seven months' additional progress.

Metacognition & Skills Capital

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NERUPI SKILLS CAPITAL	METACOGNITIVE SKILLS
• Enhance capacity for creative problem solving & decision making	
• Enhance communication and presentation skills using different mediums	
• Enhance critical thinking skills through experimentation, reflection, analysis, synthesis & evaluation	
• Enhance research skills and gain experience of independent research	
• Enhance project planning skills & expertise in designing, implementing and evaluating a small-scale project	
• Enhance interpersonal and group work skills & capacity to work collaboratively with others	
• Enhance revision skills & expertise in a range of revision techniques	
INTELLECTUAL CAPITAL Develop students' understanding by contextualising subject knowledge and supporting attainment raising	

Metacognition & Skills Capital

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NERUPI SKILLS CAPITAL	METACOGNITIVE SKILLS
• Enhance capacity for creative problem solving & decision making	
• Enhance communication and presentation skills using different mediums	2. Articulate what they learned 3. Communicate knowledge, skills & abilities to a specific audience
• Enhance critical thinking skills through experimentation, reflection, analysis, synthesis & evaluation	
• Enhance research skills and gain experience of independent research	4. Set goals and monitor their progress
• Enhance project planning skills & expertise in designing, implementing and evaluating a small-scale project	5. Evaluate and revise their own work
• Enhance interpersonal and group work skills & capacity to work collaboratively with others	
• Enhance revision skills & expertise in a range of revision techniques	6. Identify and implement effective learning strategies 5. Evaluate and revise their own work
INTELLECTUAL CAPITAL Develop students' understanding by contextualising subject knowledge and supporting attainment raising	1. Identify what they already know 7. Transfer learning from one context to another

HE Supporting Attainment

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- **Outreach**
  - contextualise school subject knowledge in HE outreach activity
  - provide opportunities for cross-curricula learning in outreach
  - form local links between subject specialists
  - supporting whole-school initiatives e.g. raising-attainment in maths
  - include active learning approaches, group work & projects
  - demonstrate links to higher & further education and employment
  - provide access to specialist facilities
- **Staff Development**
  - support Early Career Teachers & HE lecturers to develop innovative pedagogies e.g respect, relationships, reciprocity and relevance
  - encourage reflexivity by increasing understanding of reasons for differences in attainment