

IAMSE Webinar, September 2021

Creating learning entities: Augmentation in health professions education

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Acknowledgements

I acknowledge the traditional territories of the people of the Treaty 7 region in Southern Alberta. The City of Calgary is also home to Métis Nation of Alberta, Region 3.

Conflict of interest: EIC of AHSE – Springer Nature

The work I am presenting is part of a sabbatical project
“Augmentation: Changing capabilities in teaching and learning
in higher education”

Overview

Today I will present emerging theory and perspectives on health professions education using the lens of **augmentation**

I ask you to think and reflect on this perspective and its implications for your teaching, program development, scholarship, and other aspects of your education practices

Augmentation

- We are all augmented – clothes, spectacles, colleagues, schools, technologies, systems
- Is there any truly unaugmented state?
- Without culture, learning, society ... ?

- We are always in a state of augmentation
- We move fluidly between multiple states of augmentation

Ability and Disability

- Everyone has abilities
 - Things we can do, think, be
- Everyone has limits to their abilities
 - Reach, stamina, capacity
- Everyone has abilities that they cannot or do not use
 - Lack of opportunity or context
- Everyone is faced by disabling circumstances
 - Ability is insufficient to the task at hand

Ability and Capability

- Sen and Nussbaum: Human Capabilities Approach
 - Capability = ability + opportunity
- Augmentation is about changing an entity's capabilities
 - By changing an entity's abilities (knowledge, skills, attitudes etc.)
 - By changing an entity's opportunities (curriculum, instruction, culture etc.)

With and Without

- Augmentation is about changing an entity's capabilities
- Augmentation is not just about adding
- It can be achieved by adding and removing things
- How do we help this learner?
 - By adding structure, knowledge
 - By removing distractions, simplifying tasks
- We change an entity's capabilities by changing their states of augmentation

Deliberate and Circumstantial

- Changing between states of augmentation happens despite us
- Sickness and health, poverty and wealth, serendipity and entropy ... can all change states of augmentation
- But we can be deliberate in selecting or pursuing more advantageous or desirable states of augmentation
- This is what teachers and learners do all the time
- The better you are at selecting and using augmentations the more successful you will be

Multiple dimensions

- Physiological: drugs, stimulants (coffee, tea), alcohol
- Perceptual:
 - Assistive (glasses) vs extensive (microscopes)
 - Schemas and frames for recognition and familiarity
- Cognitive: cyborgs
- Biomechanical:
 - Assistive (prostheses) vs extensive (waldoes)
- Collaborative: social media, teams, professions
- Communities, societies, cultures, systems

Multiple dimensions

- Data, information, knowledge, wisdom
- Guidance (instruction)
- Structure (curriculum)
- Examples
- Feedback
- Collaboration
- Practice
- Simulation ...

Augmentation and Entities

- Think of a physician who finds themselves having to:
 - Deal with an emergency while working in multiprofessional tertiary centre
 - Deal with an emergency while working in a small rural and remote community
 - Deal with an emergency while backwoods trekking
- Their abilities are the same, but their capabilities are clearly quite different
- Not only might we expect them to be more or less capable ... we also expect them to adapt their practice to their current capabilities (state of augmentation)

Augmentation and Entities

- Think of three applicants to your program :
 - High SES, professional background
 - Middle SES, social media ‘influencer’
 - Lower SES, single parent
- Do you consider their abilities or their capabilities?
- What if they were triplets separated at birth?
- If their intrinsic abilities are identical only their relative states of augmentation differentiate them
- We differentiate between entities defined by states of augmentation as well as by physical individuals

Augmentation and Entities

- Think of the same learner in three different states:
 - Social learning at home – technology, all knowledge, all of their friends and peers, full autonomy
 - Learning in the classroom – permitted uses of technology, immediate peers, freedom within the rules of the class, some performance pressure
 - Proctored exam – no technology, no talking, minimal autonomy, major time and performance pressures
- Do we think their capabilities are the same?
- Do we treat them as if they were?

Augmentation creates new entities

- Your states of augmentation allow you to do/be different things
- As your states of augmentation ebb and flow your capabilities change – you become functionally different
- More than that, augmentation can create entities that extend beyond individuals
- Learning teams and hive minds – learning is not individual, it can become distributed
- Lingard and Hodges’ ‘team competence’ ...

Augmentation and Education

- All education involves manipulating states of augmentation
 - Teachers manipulate the augmentative states of their learners to effect desired outcomes
 - Learners manipulate their own states of augmentation to improve performance, efficiency, satisfaction
- Education therefore involves creating and manipulating learning entities' states of augmentation to meet the desired outcomes

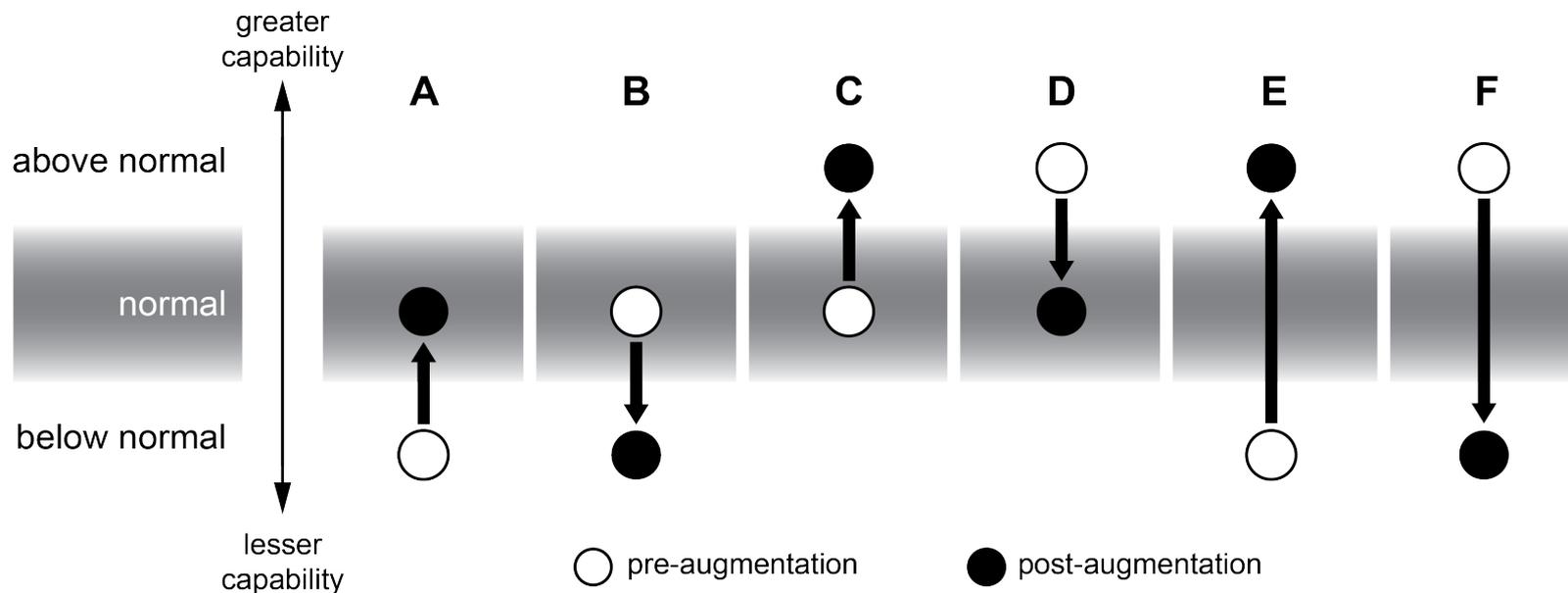
Augmentation is often troubling exactly because it does create new entities ...



Augmentation, Disability, Hyperability

Augmentation is value-laden, political, troubling

We have a really problematic sense of what 'normal' and 'natural' mean and how they are used



Augmentation, Disability, Hyperability

Ideologies of augmentation often reflect Goldilocks logic: not too much and not too little

They also reflect a strong if tacit sense of the ethics and morals of augmentation

Fairness and equity are intrinsically built on right and wrong states of augmentation

Admissions, proctored exams, professional conduct, conflicts of interest are all tied up with this ...

Reprise

- Augmentation is an intrinsic human state:
We use each other, our technologies, our contexts to augment what we can be and do
- Augmentations are dynamic - we move between states of augmentation all the time
- Our capabilities (our abilities and opportunities) reflect a particular state of augmentation
- We create and change entities through manipulating augmentative states
- And yet we rarely think about things in this way

Implications

- Thinking about teaching and learning using an augmentation and capability lens:
 - Unites otherwise disparate interventions, modes, contexts
 - Illustrates the entangled nature of moving between states of augmentation – the non-linearity and emergence of so much education practice
 - Separates out states, abilities, opportunities, capabilities ...
 - Recognizes the value of adding AND limiting capability as instructional strategies

Manifesto

- States of augmentation in learning should map to states of augmentation in practice
- We should teach, assess, and model across many different states of augmentation
- We should be more reflective of and deliberate in our uses of augmentation
- We should be more aware of and critical of the consequences of different state of augmentation
 - On learners and learning
 - On teachers and teaching
 - On education and practice as a whole

Thank You

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Questions

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