

CTE 7700 - Experiential Learning and Entrepreneurial Mindset through External Classroom Opportunities

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Outline

1. Welcome & Introductions

- a. Wayne Chang, Connor Al-Joundi, Neil McKay
- b. BET 300 & BET 608 and experiential learning component design elements

2. Working definitions

3. Design elements of

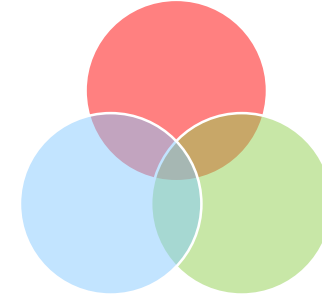
- Cognitive Load Theory
- Berkeley Model of Entrepreneurship
- CAST Universal Design for Learning

4. Students' Voice / Reflections

5. Open Q&A

Course Instructor – Teaching Statement

Create Value, Deliver Value, Capture Value



I believe that teaching is

to formatively develop, invigorate, and challenge students

to become life-long learners

and through the lens of entrepreneurial mindset,

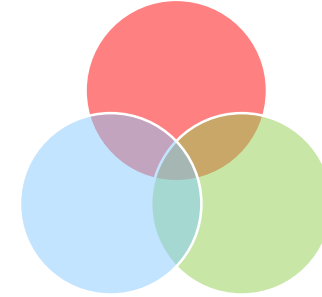
these learners aspire

to build communities, cultures and economies

with positive impact.

Courses – BET 300 and BET 608

Create Value, Deliver Value, Capture Value



BET 300 – Foundations of Venture Creation (undergrad course)

- a. Students have single venture or not-for-profit idea that is developed during the course
- b. Students are past “ideation” stage and develop startup business processes
- c. Students make assumptions about business models and test externally (outside of classroom)

BET 608 – Entrepreneurial Applications of Technology (graduate course, MBET part-time program)

- a. Students apply technologies as examples towards new products or services
- b. Students become expert learners about business models, problem spaces and opportunity assm’t
- c. Students work in teams with Partner Startups externally (outside of classroom)

Note to Self: Working definitions

Experiential Learning

- Is the **process** of learning, developing, and integrating skills and attributes through shared experience

Entrepreneurship

- Is the **pursuit** of opportunity beyond resources controlled

H. Stevenson

<https://hbr.org/2013/01/what-is-entrepreneurship>

Entrepreneurial Mindset

- The **inclination** to discover, evaluate and exploit opportunities

L. Bosman and S. Fernhaber (2018)

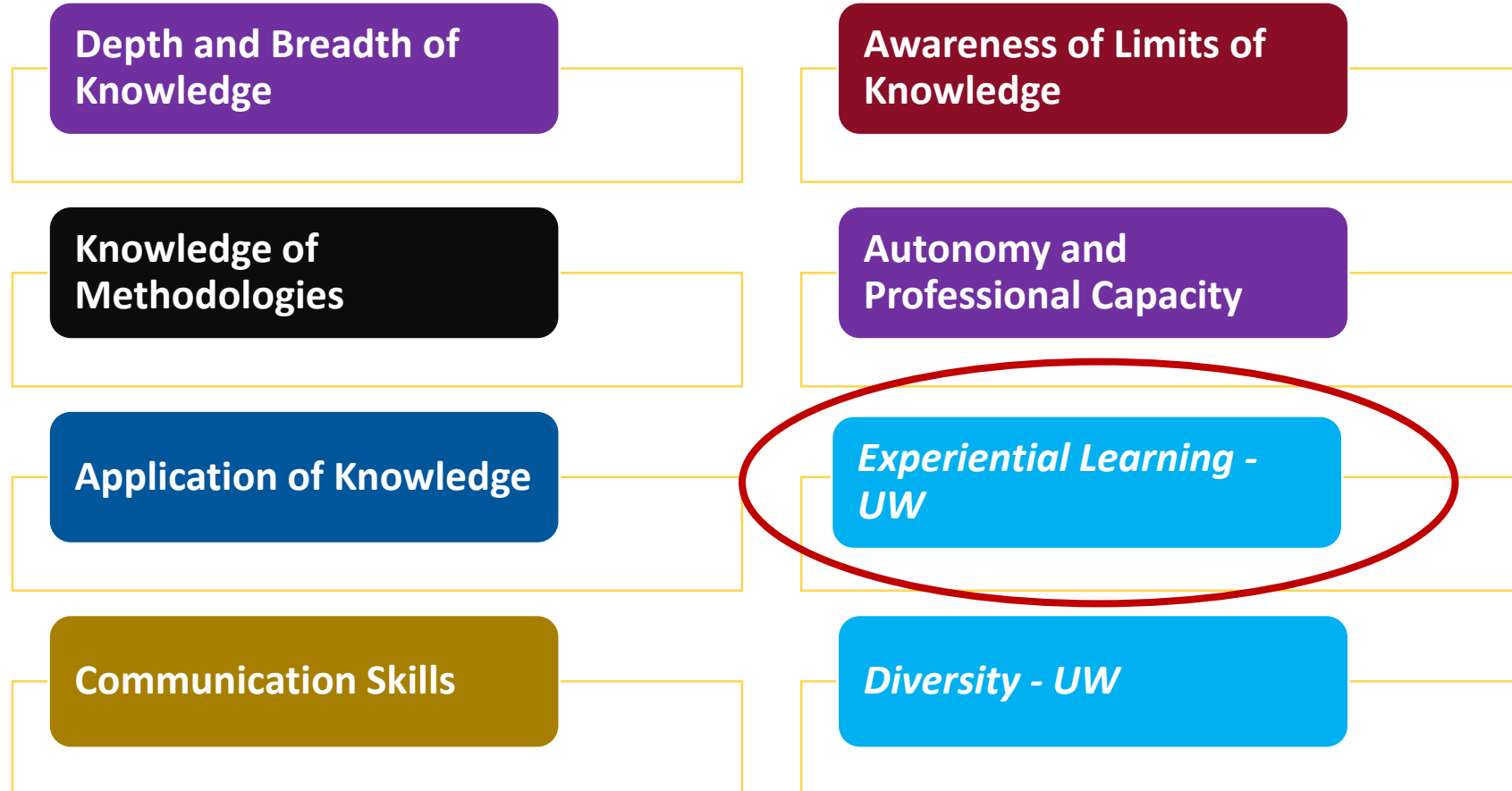
Note to Self: Working definitions



Canadian Engineering Accreditation Board (CEAB) Grad Attributes (12 total)

<https://engineerscanada.ca/sites/default/files/Graduate-Attributes.pdf>

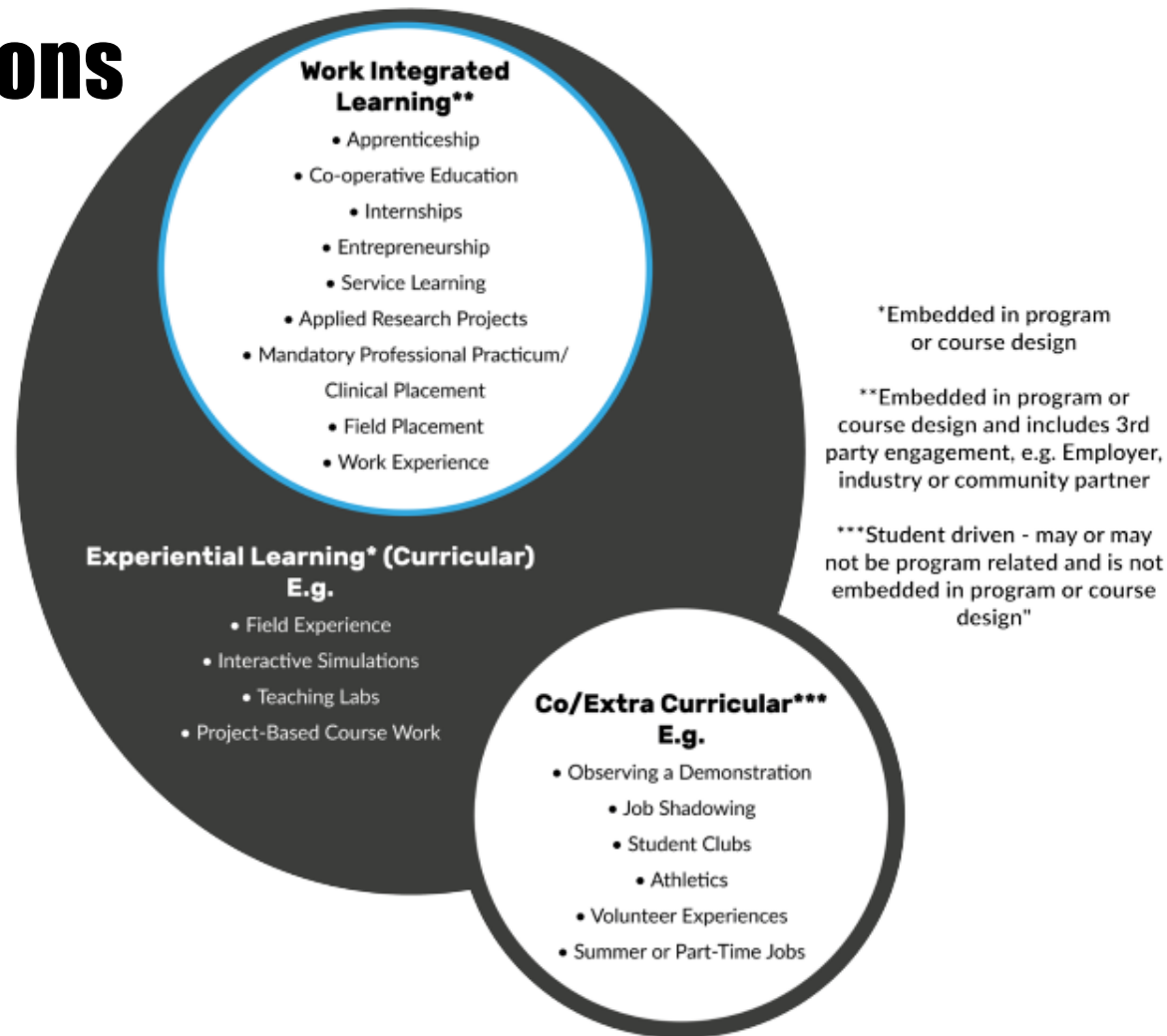
Note to Self: Working definitions



Ontario Council of Academic Vice-Presidents (OCAV) & University of Waterloo (UW)
Undergrad Degree Level Expectations (UDLE's) - 6 plus 2 added

<https://uwaterloo.ca/academic-program-reviews/program-information/undergraduate-degree-level-expectations>

Note to Self: Working definitions



CEWIL-ECAMT Co-operative Education and Work Integrated Learning Canada

https://www.cewilcanada.ca/Library/Rebrand_CEWIL/WIL-Def-Final.pdf

Cognitive Load Theory

How memory works:



Small amounts of short term information are processed in the working memory

The average person can only hold about four 'chunks' of information in their working memory at once.



Large amounts of information are stored semi-permanently in the long-term memory

Information is stored in 'schemas' which provide a system for organising and storing knowledge.



Working memory can become overloaded

If a student's working memory is overloaded, they may not understand the content being taught.



Memory overload can be prevented

With practice, and strategies to minimise cognitive load, information can be automatically recalled from long-term memory, freeing up the working memory to learn new information.

New information

-human brain can only process a **small** amount of new information at once

-'chunks' in **working memory**

to

Stored information

-human brain can process **large** amounts of stored at once

-'schema' in **long-term memory**

<https://www.cese.nsw.gov.au/publications-filter/cognitive-load-theory-research-that-teachers-really-need-to-understand>

Cognitive Load Theory

Design elements for BET300 (interactive with Connor)

Worked example effect – use worked examples to teach new content or skills

e.g. Facebook Business Model (Canvas), Cirque du Soleil & Blue Ocean Strategy

Imagination effect – encourage students to visualize concepts they have learnt

e.g. Course network map summary end of term

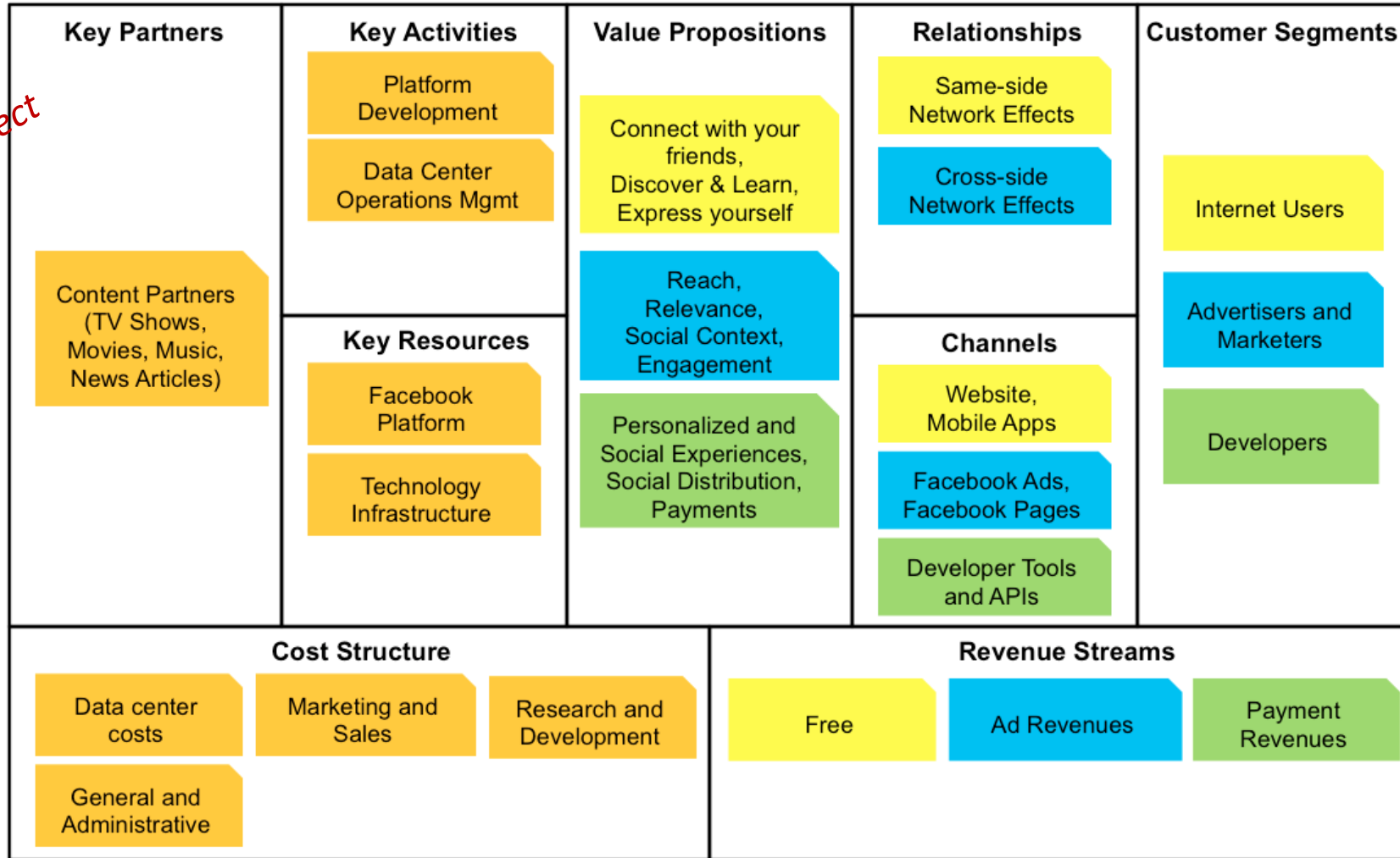
Design elements for BET608 (interactive with Neil)

Expertise reversal effect – increase independent problem-solving with more proficiency

e.g. Design AI Workshops, Partner Startup Problem/Industry Analysis & Opportunity Assm't

Facebook – World's leading Social Networking Site (SNS)

Worked example effect



www.businessmodelgeneration.com

<https://businessmodelinnovationmatters.wordpress.com/tag/facebook-business-model/>

Facebook Business Model Canvas – group workshop session (interactive with Connor & Wayne)

Worked example effect

1. scan or review the **9 components** of business model
2. select 1 or 2 components to change/update/modify
3. how do you increase **Customers** or **Revenue** (what are new opportunities)

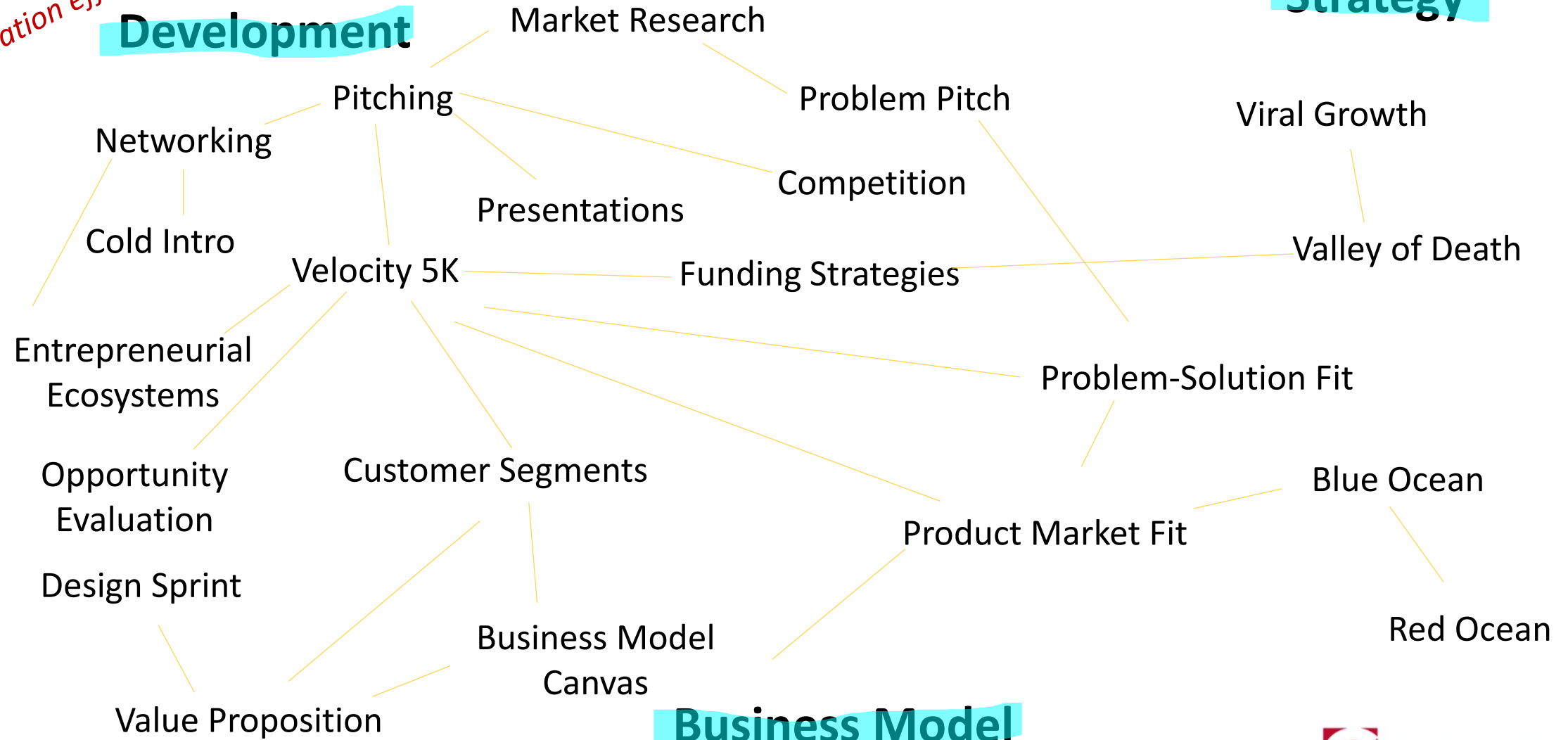
BET300 course network map

Imagination effect

Business Development

Strategy

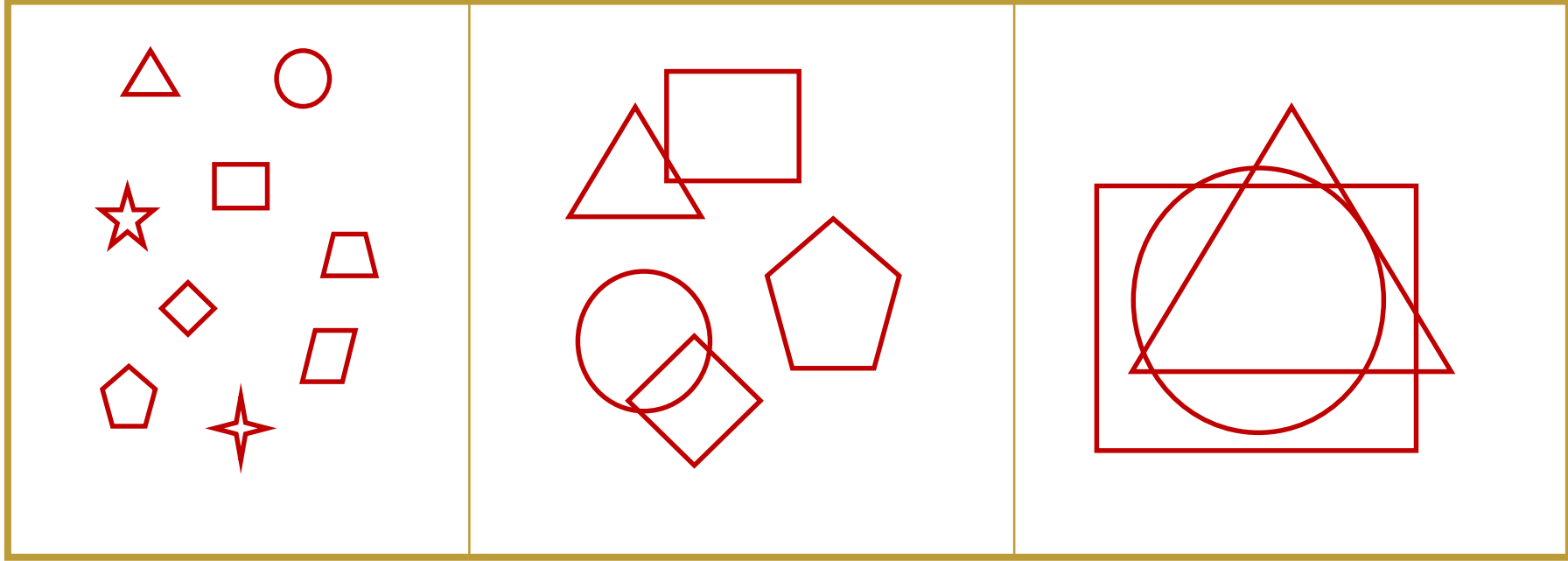
Business Model



BET 608	Due Date
AI Sector of Interest Individual presentation 5min each	Class-02
AI Learning Development Plan presentation (3-person group)	Class-04
Reflection Mid-course presentation (individual 30-60-90 dashboard)	Class-06
Problem analysis presentation & report (3-person group)	Class-07
Industry analysis presentation & report (3-person group)	Class-07
Opportunity Assessment presentation (3-person group) – Part I	Class-09
Opportunity Assessment presentation (3-person group) – Part II	Class-11
Reflection Final-course presentation (individual)	Class-12

Expertise reversal effect

Expertise reversal effect



Process step 01 - researching

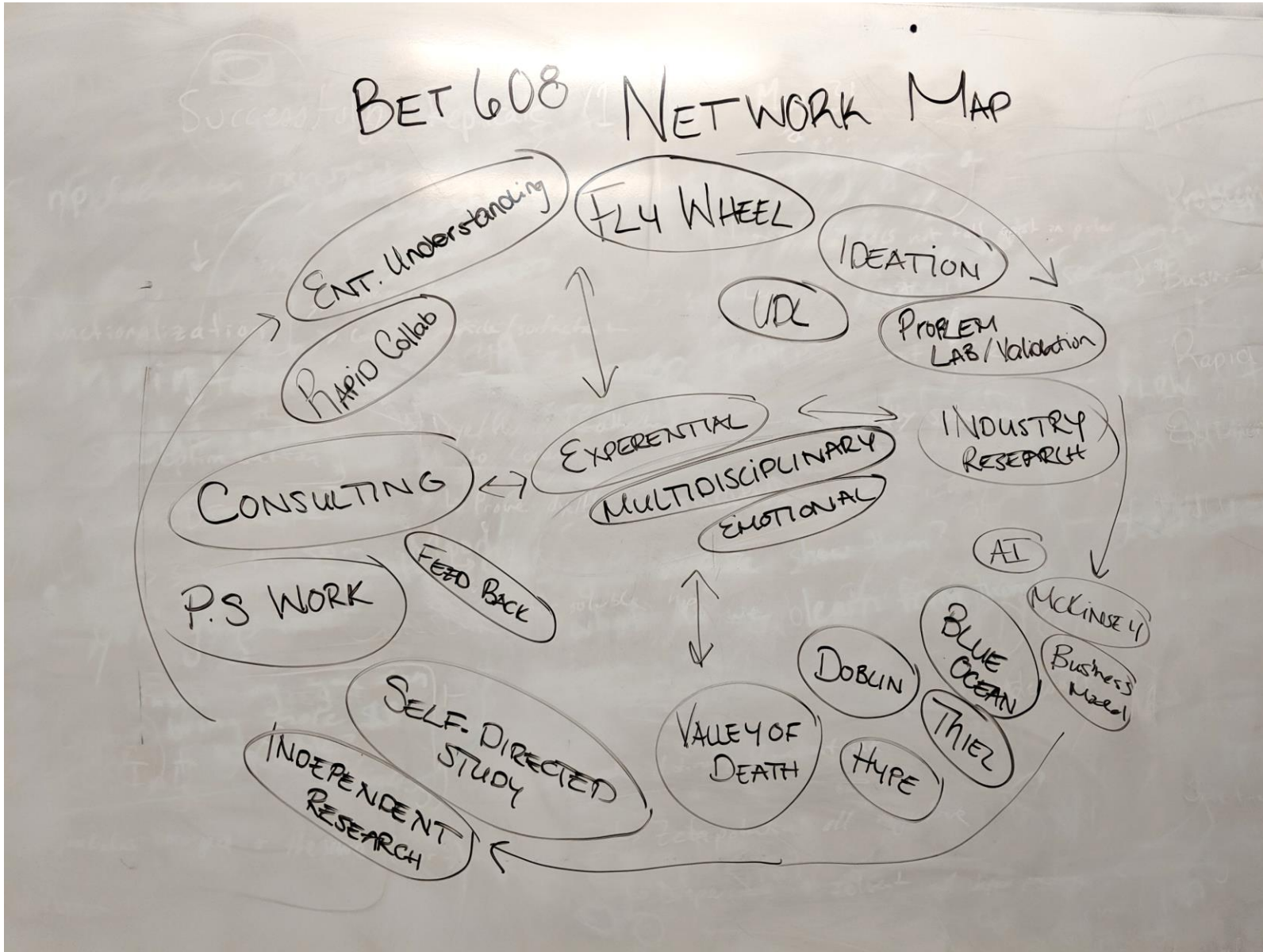
Process step 02 – applying filters

Process step 03 – converging/aligning

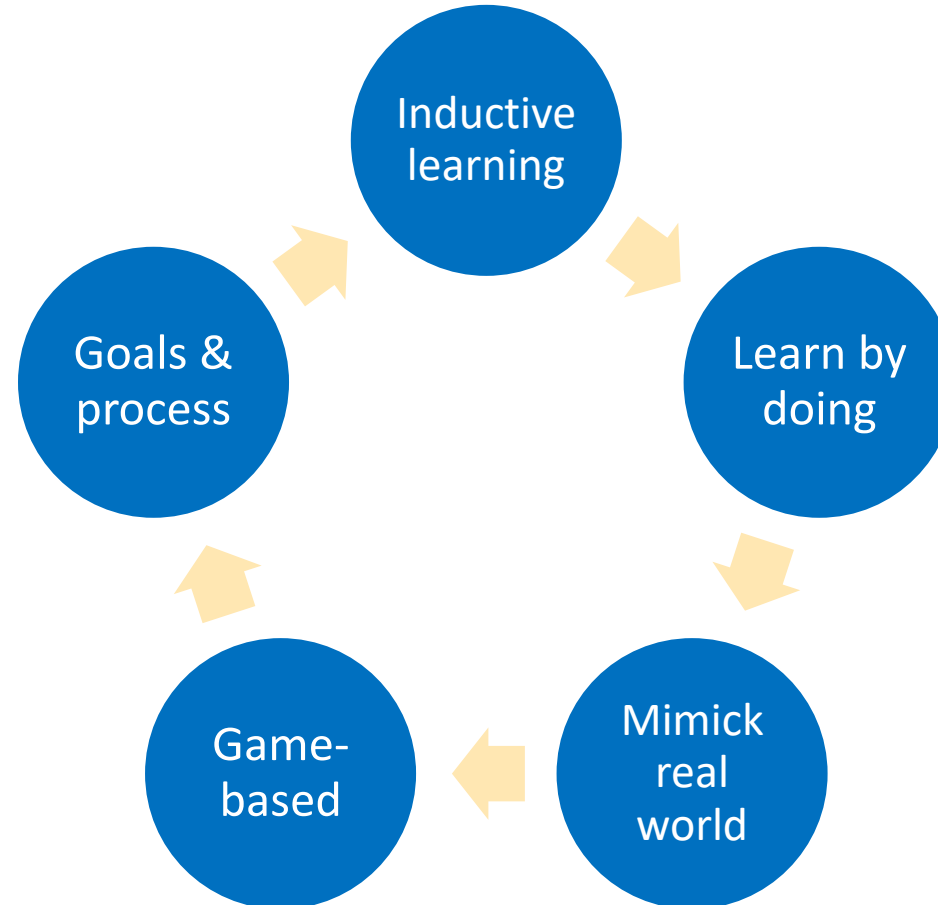


AI Learning Development Plan presentation

Imagination effect



Berkeley Method of Entrepreneurship



Berkeley Method of Entrepreneurship – 5 principles

<https://scet.berkeley.edu/berkeley-method-entrepreneurship/>

Berkeley Method of Entrepreneurship

Design elements for BET300 (interactive with Connor)

Goals & processes – apply to external pitch competitions (understand Business Model)

e.g. Problem Pitch competition, Velocity \$5K Pitch competition

Learn by doing

e.g. Design sprint, student projx w/ community partner

Design elements for BET608 (interactive with Neil)

Goals & processes – apply to Partner Startup (understand Business Model)

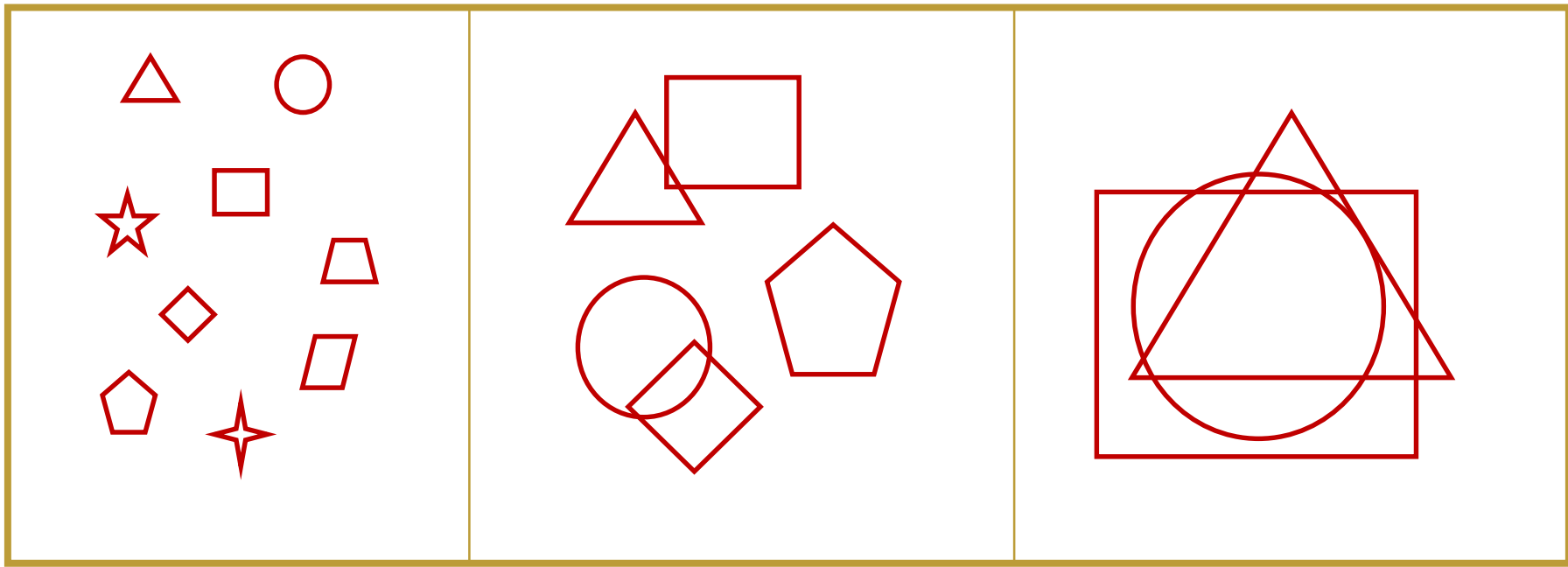
Learning by induction – relate course content to context perspectives with Partner Startup

CAST Universal Design for Learning (UDL) Guidelines



udlguidelines.cast.org | © CAST, Inc. 2018 | Suggested Citation: CAST (2018). Universal design for learning guidelines version 2.2 [graphic organizer]. Wakefield, MA: Author.

Expertise reversal effect



Process step 01 - researching

Process step 02 – applying filters

Process step 03 – converging/aligning



AI Learning Development Plan presentation

Students' Voice / Reflections

BET300 and BET608 (comments with Connor and Neil)

-top 5 takeaways

-experiential learning comments

-learning environment and group work

Students' Voice / Reflections

BET300 - comments from Connor

-top 5 takeaways

1. Make something people want
2. Business models are the most useful concept you can learn
3. Networking is the most valuable action you can practice
4. Class can be fun (even at 9pm on Wednesday)
5. "Failure" in real life is not as damaging or permanent as school makes it out to be

Students' Voice / Reflections

BET300 - comments from Connor

-experiential learning comments

- “Locked in” concepts without need for later review
- Instant theory to application loop
- Confidence in what I’ve learned
- Enhanced professor-class relationship

Students' Voice / Reflections

BET300 - comments from Connor

-learning environment and group work

- Accelerated relationship building
- Opportunities to “give back”
- Exposure to diverse expertise, experiences

Students' Voice / Reflections

BET608 - comments from Neil

-top 5 takeaways

1. A solid set of **tools**.
2. Consulting / partnership **experience**.
3. **Confidence** in providing guidance.
4. **Respect** for the tools and processes.
5. **Understanding** we can be at the leading-edge.

Students' Voice / Reflections

BET608 - comments from Neil

-experiential learning comments

- Rapid, real-world assignments elevate the content to an “experience”.
- Experience works for those “tell me about a time when . . .” interview questions.
- Understood the value of combining taught frameworks with experiences.

Students' Voice / Reflections

BET608 - comments from Neil

-learning environment and group work

- Engaged and energized tired part-time students on a Friday evening.
- Enabled rapid delivery of in-class assignments.
- Well supported by instructor (tools, processes, communications).

Frequently Asked Questions

1. What percentage of your courses are experiential learning-based and students work externally with Community or Startup Partners?

Approximately between 30-60% of course design

2. How do you find suitable external Community or Startup Partners?

We leverage our alumni, and entrepreneurship ecosystem network in Waterloo Region

3. How do you evaluate or grade experiential learning component

We look for evidence of process iterations, self-reflections and successful/failed testing

Students ability to present and communicate processes and identify new opportunities

Students' shared learnings and insights both as groups and individually (top takeaways)



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