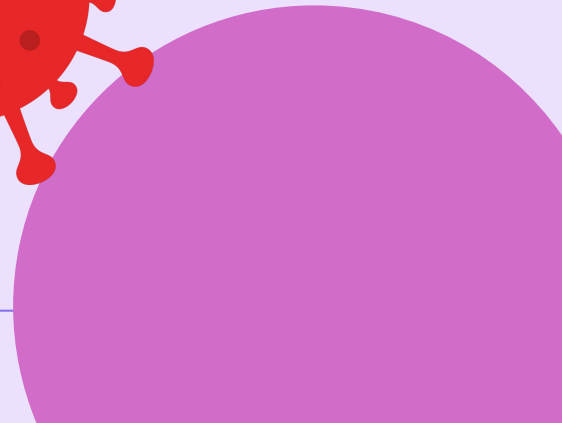
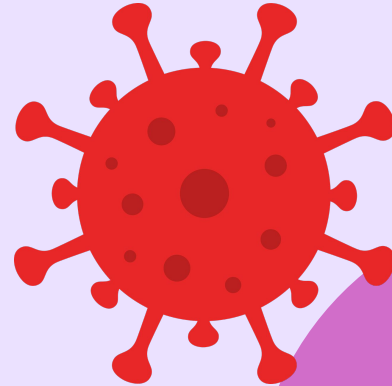


REFLECTIONS ON REDESIGNING A GAME-BASED LEARNING MODULE FOR PRE-SERVICE TEACHERS DURING THE PANDEMIC EXPERIENCE

Denis Moynihan, Hsiao-Ping Hsu,
Deirdre Butler, Kevin Maguire



OUR PRESENTATION

01

CHALLENGES

02

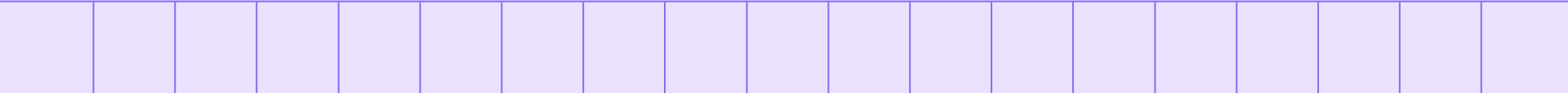
SOLUTIONS

03

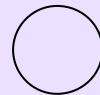
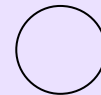
EVALUATION

04

REFLECTIONS



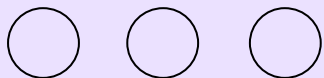
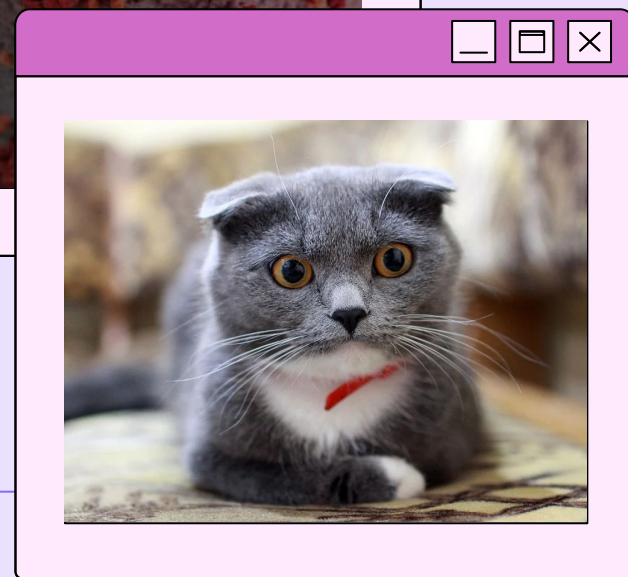
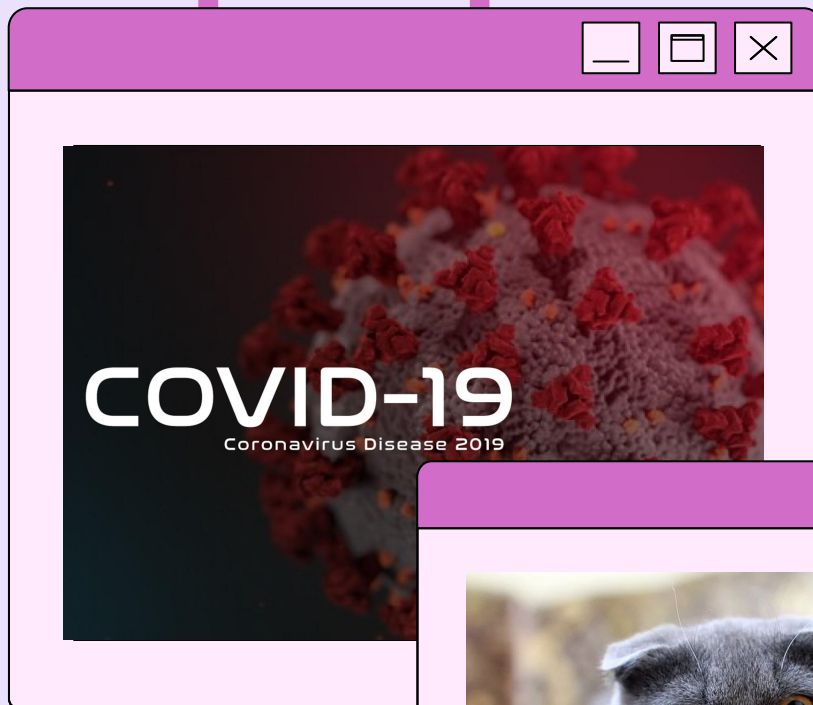
CONTEXT OF THIS PRESENTATION

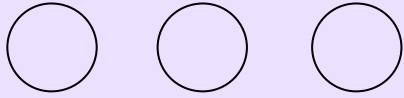




BACKGROUND

- COVID-19
- Emerging and ongoing research
- Move to a hybrid online environment



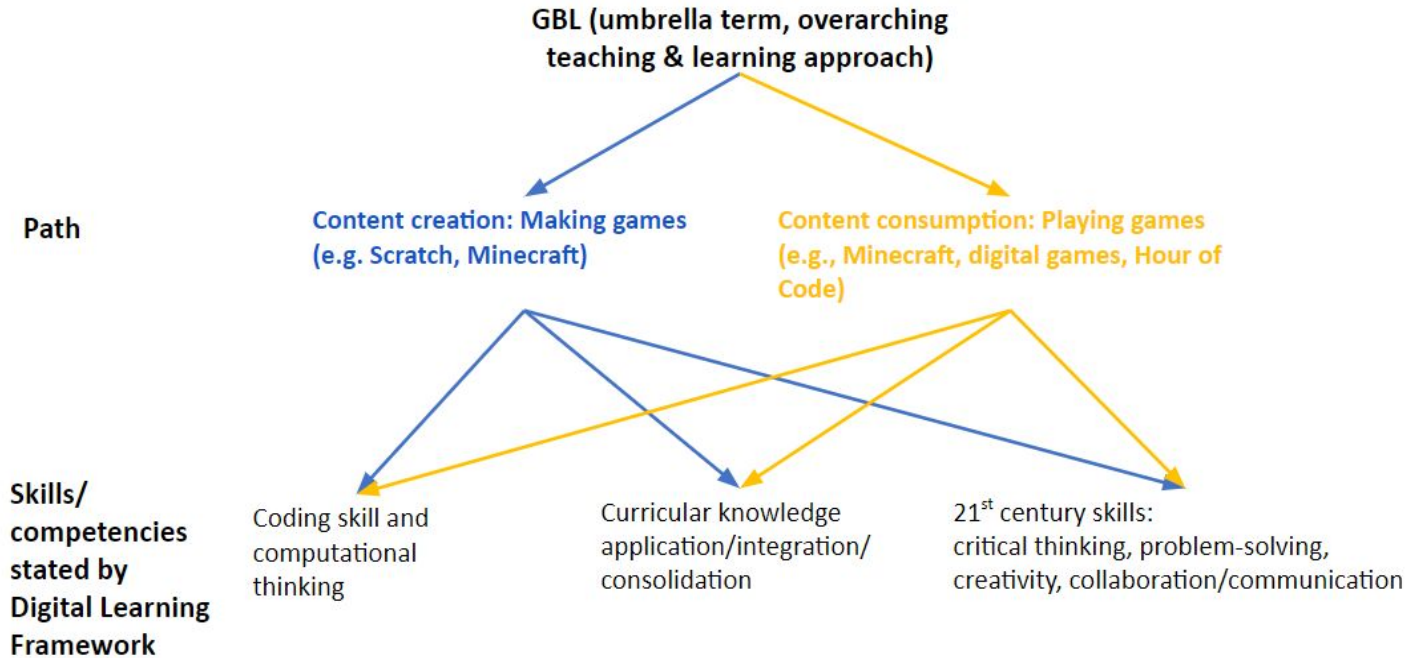


WHAT IS GAME-BASED LEARNING?

GBL is an approach to learning, teaching and assessment where students engage with digital games in learning contexts designed by teachers.

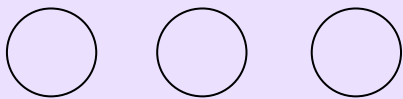
OUR CURRICULUM

BE4 GBL Conceptual Map

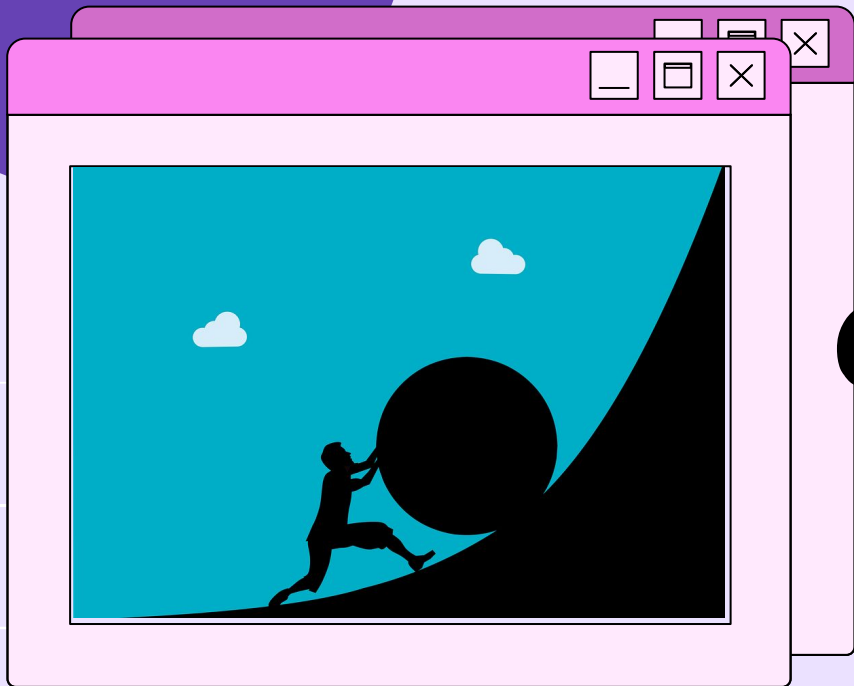


OUR CURRICULUM





01



CHALLENGES



OUR CHALLENGES



Insufficient preparation time



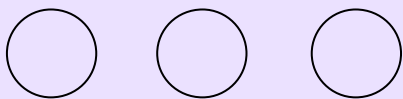
Content requires a number of scaffolding and discussions



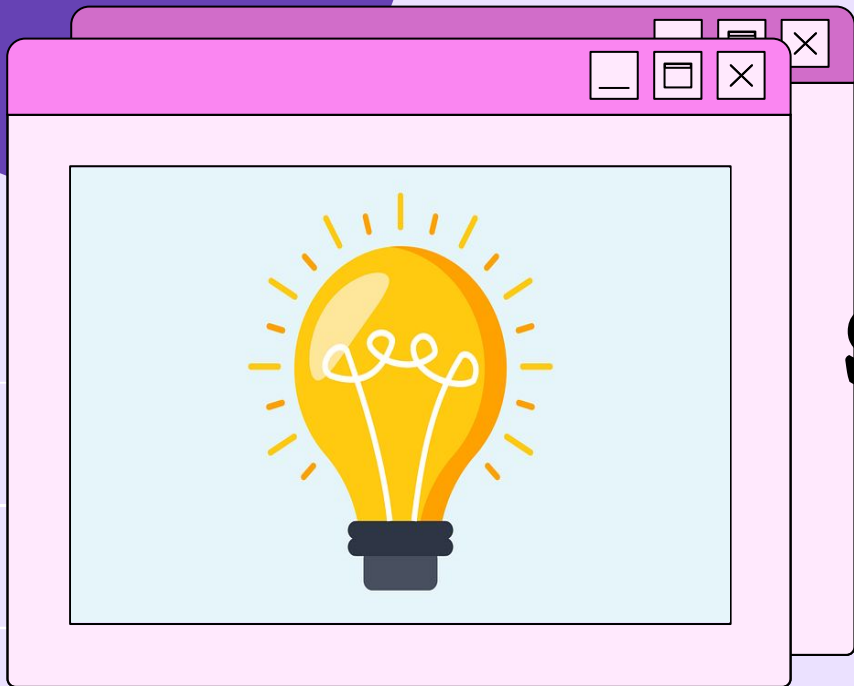
Our limited online teaching experience for the module

Frequent exposure to digital games required to build up student teachers' confidence and competence in using GBL





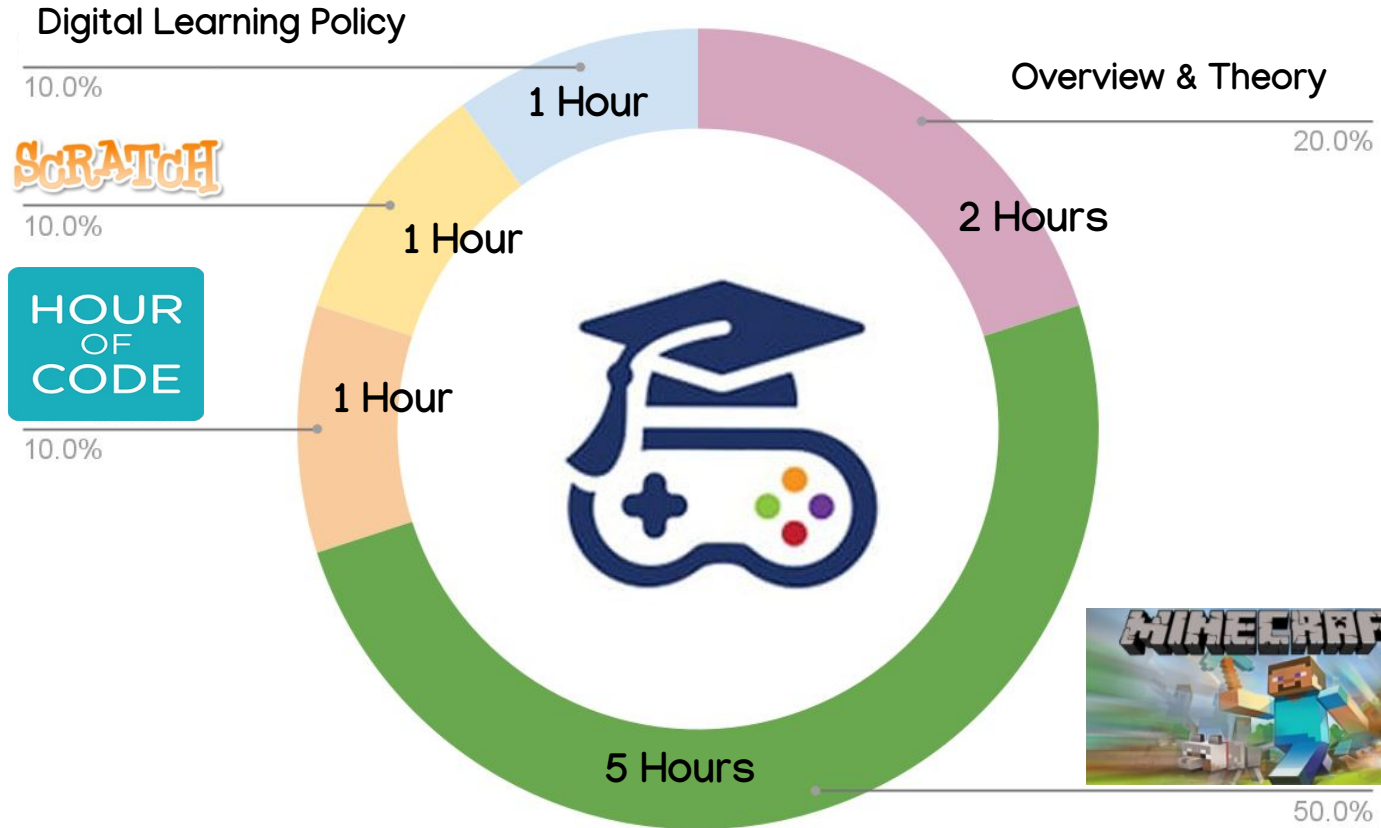
02



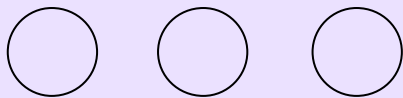
SOLUTIONS



CURRICULUM CHART



OUR TEACHING METHOD



EXPOSURE

Short-term but frequent exposure of gaming

DIVERSITY

Experience with gameplay and game creation

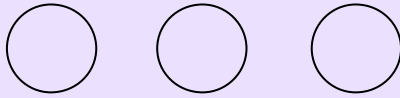


MIXED

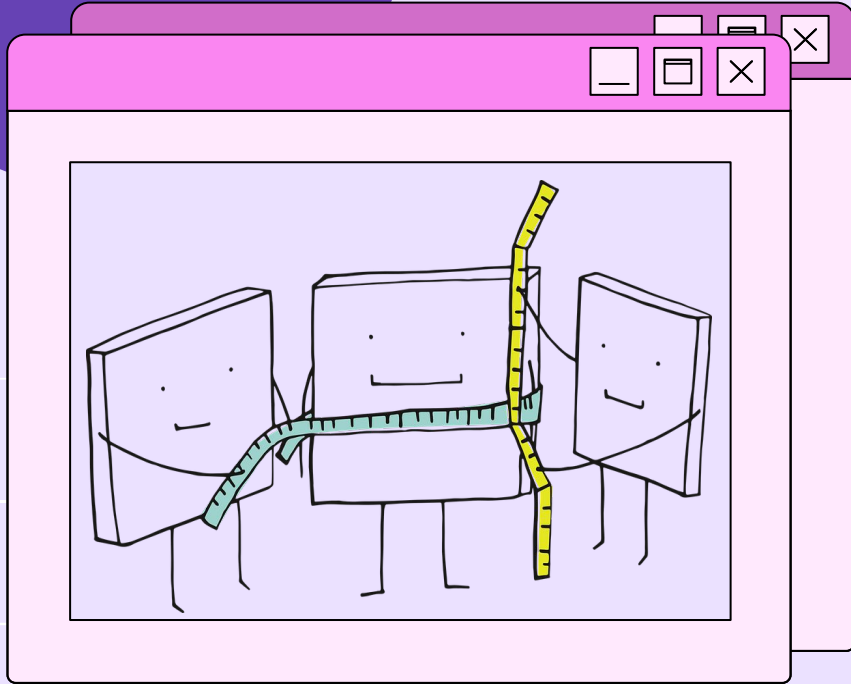
Combination of asynchronous and synchronous learning

SCAFFOLDING

Intensive teacher- and peer-scaffolding



03



EVALUATION

**-COMPARE 2019 (PRE COVID, FACE-TO FACE)
AND 2020 (DURING COVID, ONLINE)**



OUR QUESTIONNAIRE

Self-report Questionnaire with 5-point Likert-scale

– **Confidence in using GBL** (12 items, Cronbach's α 0.916)

Example question:

I feel confident that I have the skills necessary to use GBL for teaching

– **Competence in using GBL** (6 items, Cronbach's α 0.796)

Example question:

I can design GBL activities which deepen my students' understanding of subject knowledge.

Questionnaire reviewed by external experts

Questionnaire administered **pre and post module engagement**

OUR DATA ANALYSIS

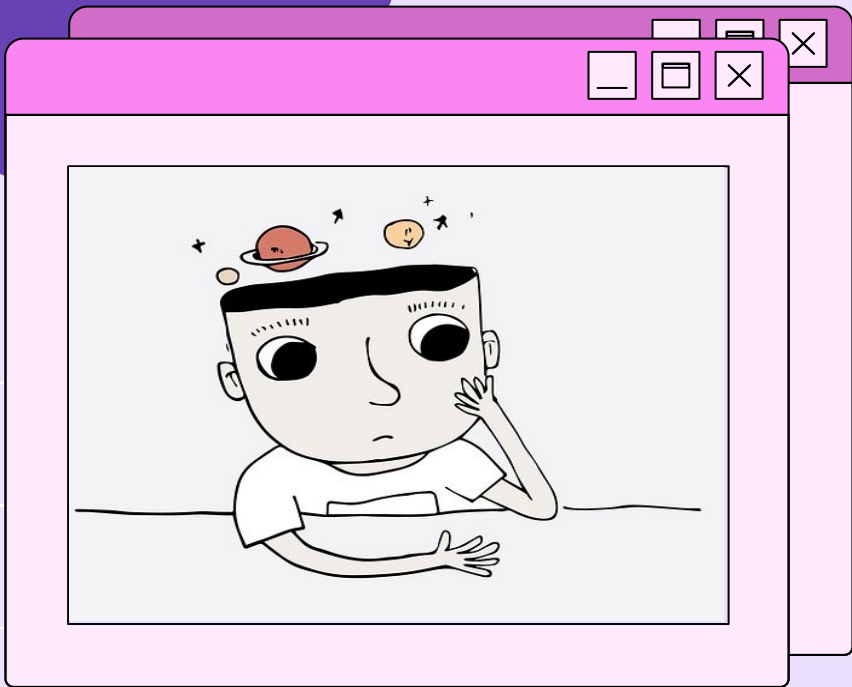
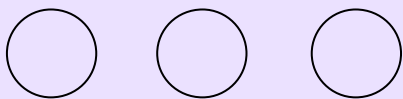
-The changes of the pre-service teachers' confidence and competence in GBL were examined using the **Wilcoxon Signed-rank Test**

CONFIDENCE

	2019 Face-to-face teaching <i>Confidence</i>	2020 Online teaching <i>Confidence</i>
N	182	81
Pre-level	2.89	3.02
Post-level	3.43	3.95
Wilcoxon signed-rank test result	T = 13886.00, Z = -8.81, $p < .001$	T = 3224.00, Z = -7.36, $p < .001$
Effect size r	0.65 (large)	0.82 (large)

COMPETENCE

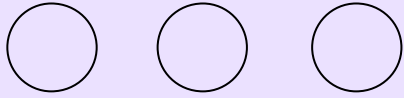
	2019 Face-to-face teaching <i>Competence</i>	2020 Online teaching <i>Competence</i>
N	182	81
Pre-level	2.89	3.10
Post-level	3.43	3.79
Wilcoxon signed-rank test result	T = 12339.50, Z = -8.52, $p < .001$	T = 2577.00, Z = -6.75, $p < .001$
Effect size r	0.63 (large)	0.75 (large)



04

REFLECTION





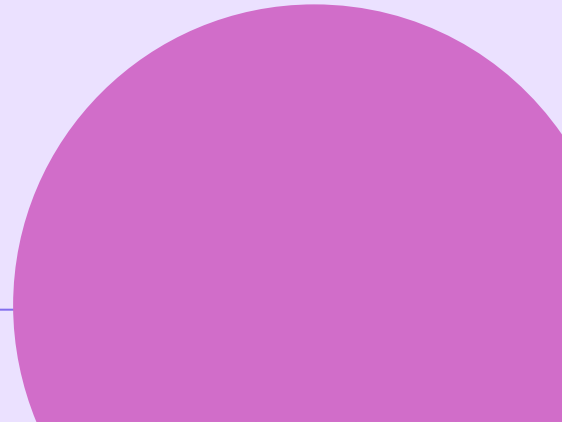
Technical reflections



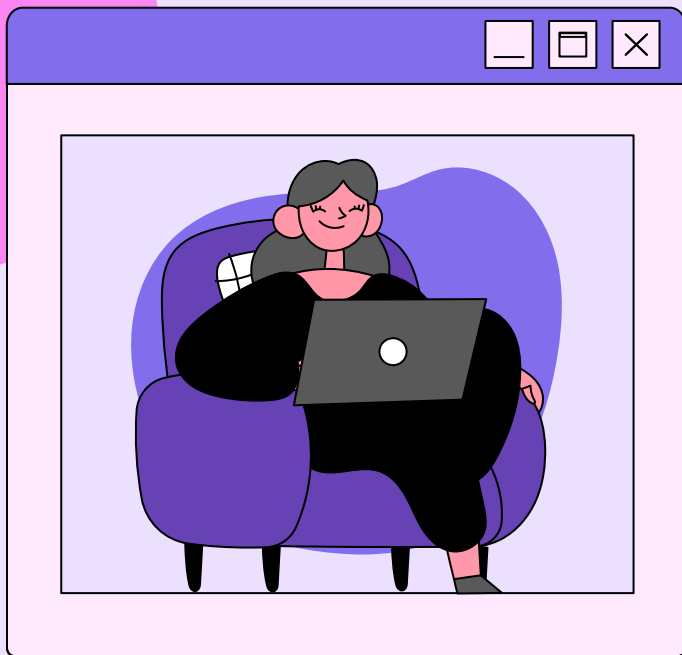
Pedagogical reflections



Content reflections



THANKS FOR JOINING US



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