THE UNIVERSITY OF BRITISH COLUMBIA

Vancouver Campus

Master of Educational Technology

Created by Vera Xiong

Primary/Junior/Intermediate/Senior Lesson Planning Template

Grade(s): 9-12	**Date(s): July 14, 2023**	**Duration: 2 * 120 mins**	**Lesson Topic/Title: #4 Define & Ideate**
Subjects: Social Studies		**Number of Students: 30 students**	

Big Ideas:

1. **Design thinking and doing**: Use Applied Design Skills and Technologies (ADST) to address social, ethical, and sustainability issues
2. **Effective design solutions**: Encourage students to consider equity, ethics, and sustainability when formulating effective design solutions
3. **Brainstorming**: Explore possibilities for addressing social justice issues through generative AI like ChatGPT and DALL-E2
    a. "What's good?"
    b. "What's missing?"
    c. "What's possible?"

Curricular Competencies:

- **Creative thinking**
    - Come up with original ideas
    - Consider diverse perspectives
- **Critical thinking**
    - Critically analyze and evaluate information
    - Create design challenges and potential solutions

- **Social responsibility**
  - Apply ADST and EDIDA frameworks to address real-world issues (inequality, racism, biases…)

- **Ethical reasoning**
  - Recognize and analyze ethical dilemmas (genetic engineering, end-of-life decisions, environmental conservation VS economic growth)

- **Environmental stewardship**
  - Take responsible actions to protect and sustain the environment
  - Advocate for sustainability and model sustainable behaviors

Content Objectives

Notes: To be completely honest, I can't really differentiate content objectives, general objectives, and specific objectives. As a result, I wrote all objectives in one big chunk, including action items, please see blow.

General Objectives

a. Followed by specific objectives + action items

1. Apply the principles of EDIDA and ADST frameworks to create a design challenge
   a. Discuss the significance of incorporating EDIDA as well as design thinking within the ADST framework
   b. Guide students in formulating a design challenge that reflects both frameworks
   c. Encourage critical thinking and reflection on how the design challenge can promote equity, challenge systemic biases, and embrace diverse perspectives

2. Create a clear and focused design challenge
   a. Identify the key social issues that need to be addressed in the design challenge
   b. Create a design challenge that incorporates social, ethical, and sustainability considerations
   c. Evaluate the effectiveness of the design challenge in addressing multi-dimensions of the issue

3. Foster a better understanding of social, ethical, and sustainability matters
   a. Encourage student discussions and activities that explore social, ethical, and sustainability issues
   b. Ask students to critically analyze the social dynamics, power structures, historical contexts, practical skills, and technological implications that contribute to inequality and sustainability challenges
   c. Promote active consideration of diverse perspectives to deepen student's understanding of the social context, ethical dimensions, and practical implications of social studies

21st CENTURY COMPETENCIES: *Which COMPETENCIES will be addressed and how?* Critical thinking and Problem Solving/Creativity and Innovation/ Collaboration/Communication/Global Citizenship/Metacognition and Reflection

- Critical thinking
- Problem-solving
- Communication
- Collaboration
- Ethical reasoning
- Social responsibility
- Creativity and innovation
- Global citizenship

LEARNING GOAL(S) I can… I will….

- Guide students in analyzing the social, ethical, and sustainability dimensions of social studies to identify key elements for inclusion
- Facilitate the formulation of design challenges that incorporate social justice, ethics, and sustainability considerations
- Support students in justifying the design challenge based on the alignment with principles of EDIDA and ADST frameworks
- Foster collaboration among students by leveraging their talents and challenging them to step outside of their comfort zones
- Create opportunities for student to provide feedback to their peers, and reiterate the design challenge
- Enhance communication skills by offering guidance on effective communication techniques
    - Active listening
    - Empathy
    - Open-mindedness
    - Inclusive language
- Promote ethical reasoning by facilitating discussions on the fairness, justice, and equity implications of the design challenge

PRIOR KNOWLEDGE *Prior to this lesson, students will be able to…*

For Grade 9-12 students, most of them have been exposed to social concepts, historical events, cultural practices, and social systems through life and social experiences. That being said, their prior knowledge about social studies may vary based on region, culture, race, and other inherent factors.

Equity, Diversity, Inclusion, Decolonization, Anti-Racism (EDIDA) Frameworks-
Considerations:

- *How are you going to ensure that this lesson utilizes the EDIDA frameworks to create an inclusive space for your students?*
    - *Establish clear expectations and guidelines for a respectful and inclusive environment*
    - *Incorporate diverse perspectives and voices in the learning materials, examples, and discussions*
    - *Encourage empathy and active listening to foster understanding and appreciation of different perspectives*
    - *Provide opportunities for self-reflection and peer reflection*
    - *Analyze social issues from multiple levels, individual, community, regional, national, and global*
- *Consider what materials you will use*
    - *Videos*
    - *Graphics*
    - *Music*
    - *Virtual Reality goggles*
    - *Multicultural representations, i.e. artworks, clothing, food, musical instruments, photography, etc.*
- *How will you ensure all voices are included and heard?*
    - *Bring in guest speakers from diverse backgrounds and experiences*
    - *Actively monitor and facilitate discussions to ensure that quieter or less assertive students have a chance to share their thoughts and that dominant voices do not overshadow others*
    - *Implement strategies such as round-bin discussions, fishbowl conversations, and/or small group conversations*
- *From what lens will the content be delivered?*

It would have to be from the lens of social justice, equity, ethics, and sustainability.
These lenses ensure that students consider the broader implications of thie design solutions and strive for inclusive and responsible problem-solving.

- *How will you present and implement the content in a way that is culturally responsive and relevant?*

I am committed to use:

- *Culturally diverse materials, examples, readings, and activities*

- *Inclusive language and multicultural representations*

- *Culturally responsive teaching techniques in honor of students' cultural backgrounds and lived experiences. Through story-telling, collaborative group work, and interactive discussions that allow students to share their unique perspectives in their preferred ways*

- *Engage with community organizations, experts, and individual guest speakers who can offer insights and perspectives relevant to the cultural context (If not all, perhaps one guest speaker per session)*

- *Recognize and challenge biases*

- *Use flexible assessment methods. Provide multiple means of assessment to showcase their learning through different modalities:*
    1. *Digital media projects: multimedia presentations, videos, podcasts, and interactive websites*
    2. *Community-based projects: collaborate with community organizations (conduct interviews, host workshops, and student focus groups, etc.)*
    3. *Visual art and design: posters, infographics, mindmaps, collaborative boards, virtual reality, painting, sketch, caligrapher, and other forms of arts (following low floor, wide walls, and high ceiling practices)*
    4. *Collaborative exhibition: showcase artifacts, models, and immersive art exhibition (with music, wind, smell, and touch - using five senses to create a memorable and engaging experience)*

DIFFERENTIATED INSTRUCTION *What will I do to assist and/or differentiate instruction for individual learners? (Materials, Delivery, Outcome)*

This is addressed in both the provocation and the design challenge. Please look for multimodality in materials, instructions, way of assessing student's learning, and multiple ways of showcasing their work.

Accommodations: (PLEASE REFER TO THE INCLUSION GUIDE)
Please refer to the provocation and design challenge below.

MATERIALS*:*

- *Digital devices: mobile phones, laptops, tablets*
- *Secure internet connection to online resources*
- *Access to generative AI tools ChatGPT and DALL-E2*
- *Presentation equipment, ie. projector, screen, microphone*
- *Digital graphic design tools, ie. Canva, Adobe, Figma, or more*
- *Art supplies: paper, markers, colored pencils, eraser, paint, or more*

INTRODUCTION/MINDS-ON *See below*	**CRITICAL GUIDING QUESTIONS:** *See below*
ACTION-LEARNING EXPERIENCES: **A) EXPERIENCE 1 (Provocation)** *Using generative AI technologies, ChatGPT and DALL-E2 to foster critical thinking and explore social issues* **Instructions** - **Introduction (10 minutes)** ● *Introduce ChatGPT and DALL-E2 as powerful generative AI tools that can assist in exploring and understanding social issues through text and visual representation* ● *Emphasize the importance of critical thinking and inquiry-based learning in analyzing and addressing social issues* - **Social issue exploration (20 minutes)** ● *Students can choose a specific social issue relevant to their interests (e.g., climate change, gender inequality, racial discrimination, low birth rate/high divorce rate, equitable-deserving individuals, minorities groups, etc.)* ● *Depending on what topic students land on, provide basic background information on the selected social issue, including its causes, impacts, and potential solutions*	**The big question:** When it comes to deeply rooted social issues, like bias, racism, inequality, sustainability Is there a gap or divide between human responses and AI-generated responses? Prompt students to use generative AI tools to provoke their thinking. Compare their own thoughts to AI-generated response **Other guiding questions:** What is generative AI capable and incapable of? Is AI biased? What makes AI biased?

● *On top of that, encourage students to conduct research using reliable sources to gather additional information about the social issue (e.g. Google Scholar, library sources, journals, museums)* - **ChatGPT Questioning (25 minutes)** ● *Show students how to use ChatGPT to ask questions related to the selected social issue* ● *Guide students to think critically about the information generated by ChatGPT, considering potential biases or limitations* ● *Encourage students to refine their questions based on the responses received from ChatGPT* - **DALL-E2 Visual Presentation (25 minutes)** ● *Ask student to use DALL-E2 to create visual representations (artwork, illustrations, or collages) that depict or symbolize aspects of the selected social issue* ● *Instruct students to select appropriate textual prompts that capture the essence of the social issue they are representing* ● *Provide art supplies such as paper, markers, colored pencils, erasers, paint, and digital design tools (Canva, adobe, Figma) to facilitate the creation of visual representations. Also to accommodate various learning needs and accessibility* - **Reflection (20 minutes)** ● *Give time for students to reflect on their experience using ChatGPT and DALL-E2* ● *Facilitate small group discussions where students share their questions and AI-generated responses, insights gained, and visual representations* ● *Encourage critical analysis of the social issue* ○ *Consider multiple perspectives on the issue* ○ *Discuss potential solutions or actions to address the issue* ● *Open discussion on the strengths and limitations of AI-generated responses compared to human-generated ideas* ● *Discuss the unique capabilities of humans in terms of empathy, cultural understanding, and creative problem-solving*	If AI is biased, how we as human break down our own biases? Lastly, how can we leverage AI to address social issues? What are the strengths and potential improvements of each design proposal?

B) EXPERIENCE 2 (Challenge)

Design a culturally inclusive public art installation that promotes social justice and challenges stereotypes in your community

Instructions

- ***Introduction (10 minutes)***
  - *Emphasize the power of art to create positive change, challenge perceptions, and celebrate diverse cultures*

- ***Research (15 minutes)***
  - *Ask students to research a social issue from credible sources (Google Scholar, UBC Library, online Journals, encyclopedia, online museum, etc).*
  - *Prompt students to consider the cultural diversity within the local community and the importance of representation and inclusivity in the art installation*

- ***Ideation & Creation (15 minutes)***
  - *Interact with ChatGPT to generate ideas, insights, and perspectives related to social justice, cultural inclusivity, and public art installations*
  - *Use DALL-E2 to generate visual representations based on textual prompts, capturing the essence of the social issue and challenging stereotypes*
    - *There could be two ways of showcasing generative AI technology: a positive example of generative AI addressing the select social issue versus a debatable example*
    - *Additionally, ask students how would their responses be different than AI. What's missing? What's good/bad?*
  - *Meanwhile, students can also choose to create their own artwork in their preferred format, i.e. storytelling via multi-media, immersive art experience involving 5 senses (Imagine Van Gogh as a good example), or others*

- ***Design proposal (20 minutes)***
  - *Create a design proposal for your culturally inclusive public art installation*
  - *Encourage students to consider the target audience, location, materials, size, symbolism, interactivity, cultural representation, and accessibility of the art installation*

○ *Guiding question: How to create an engaging experience through mobilizing 5 senses? For example, are there objects the audience can touch, feel, smell, hear, or even taste?* ● *Challenge them to use sustainable materials for art installation (for instance, go paperless, use recyclable materials, source materials from community donation)* - ***Presentation (25 minutes)*** ● *Students share in small groups (3-5 ppl per group) to present their design proposal* ○ *Give a presentation pitch (equals to 5 minutes per student)* ● *Students explain their rationales, discuss the social justice themes, and highlight how their installation challenges stereotypes* ● *hieve* - ***Reflection (20 minutes)*** ● *Group reflection: Reflect on the potential impact of your art installation on the community, addressing issues of representation, inclusivity, and community engagement* ● *Individual reflection: reflect on their design process, the challenges faced, and the impact they aim to achieve* ● *Peer reflection: Students provide feedback and constructive suggestions to their peers' design proposals*	
CONSOLIDATION/CONCLUSION: *In conclusion, the provocation and challenge emphasize the importance of understanding social, ethical, and sustainability issues while utilizing the ADST and EDIDA frameworks.* *By integrating these frameworks, students are encouraged to develop inclusive thoughts and minds, enhancing their design thinking and creative problem-solving abilities.* *I can't wait to see the art installation proposals. These proposals will showcase students' creative ideas, deep understanding of social issues, and commitment to addressing them through inclusive and thought-provoking artwork.*	**CRITICAL GUIDING QUESTIONS:** **Are ADST and EDIDA frameworks effectively conveyed through the design challenge proposal?**

ASSESSMENT (STRATEGIES, TOOLS) - DIAGNOSTIC, FORMATIVE, SUMMATIVE

- Diagnostic Assessment:
  - pre-assessment

- Formative Assessment:
  - peer-to-peer feedback
  - small group discussion
  - reflection journals (in padlet, slido, Learning Management Systems)

- Summative Assessment:
  - presentation assessment
  - design proposal assessment

EVALUATION OF THE LESSON 2*90 minutes

sessions are:

- **Project-based (students choose their own project)**
  - **Translate to hands-on experience**
- **Inquiry-based (students carry the question)**
  - **Translate to problem-solving**
- **EDIDA framework (it is thoroughly incorporated in both provocation and the design challenge)**
  - **Translate to inclusive learning**
- **ADST framework (students use design thinking to solve real-world problem)**
  - **translate to creative thinking and critical thinking**

REFLECTION:

1. Were my students successful in meeting the learning goals? How do I know?
Because these two sessions are in-person, I can assess the learning goals through class discussions in various contexts (peer-to-peer, small group, self-reflection).

2. Did my instructional decisions meet the needs of all students? If not, what are my next steps?
I think it depends, some students may feel excited about using generative AI to facilitate learning, and others may feel opposed to this learning approach. As depicted above, there are art supplies provided for them to communicate their thoughts, other traditional research methods (library, journals, etc) are also welcomed in this class.

3. What worked well? Why?

Introducing generative AI is a smart move, as it's still a relatively novel idea and a new way of self-regulated learning. There's also accommodation to the changing needs of students, like using different technology whether traditional or novel.

4. What will I do differently

a. When teaching this lesson again?

I want to invite AI technologists to explain the rationale of how AI is built. Possibly in the format of a 45 mins workshop.

b. For the subsequent lesson?

I want students to showcase how they use natural language to communicate with other students. This may come across as peer-to-peer support, as they may have similar thoughts or perhaps the same challenges as they create the design challenge.

5. What are the next steps for my professional learning?

I desire to stay updated with upfront Educational Technologies. I applied for an EdTech advisor role at Langara College, still waiting to hear back from the hiring committee. Hopefully, I could apply what I have learned at MET to the professional world.

Within the EdTech department, there are professional training sessions open for all staff and faculty. Within the faculty instructional design team, lunch and learn opportunities are also available throughout three semesters a year.