Inquiry & interest-based approaches for learner engagement: instructional perspectives from academic & public libraries

Introduction/Welcome

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epl.ca EDMONTON PUBLIC LIBRARY
Spread the words.

Introductions - Where participants are from today

Tufts University
University of Toronto
University of British Columbia
MacEwan University
The King's University
Government of Alberta
University of Alberta - Rutherford library
Southern Alberta Institute of Technology
University of Western Ontario
Strathcona County Library
University of Education, Winneba, Ghana
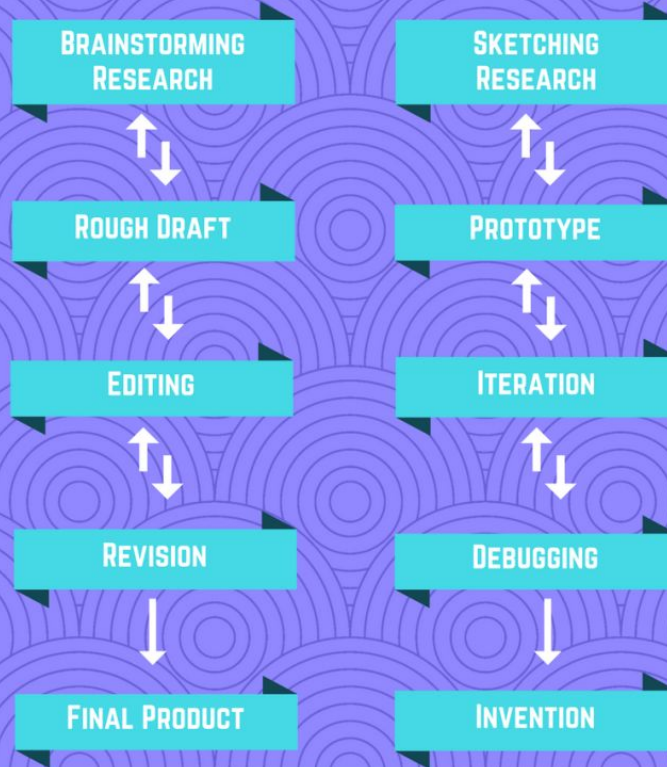University of Ottawa
Northern Lights Library System

Workshop Outline

Welcome + Challenge	Getting to Know You Challenges: Design a ??? Robot Fashion show
Explore + Demonstrate	Brainstorm, explore materials & technology
Make + Experiment	Design, prototype, test
Share + Celebrate	Pitch, strut, cheer!

WRITING & MAKING

PROCESS

BRAINSTORMING RESEARCH	**SKETCHING RESEARCH**
↑↓	↑↓
ROUGH DRAFT	**PROTOTYPE**
↑↓	↑↓
EDITING	**ITERATION**
↑↓	↑↓
REVISION	**DEBUGGING**
↓	↓
FINAL PRODUCT	**INVENTION**

Learning Goals

Design Challenge

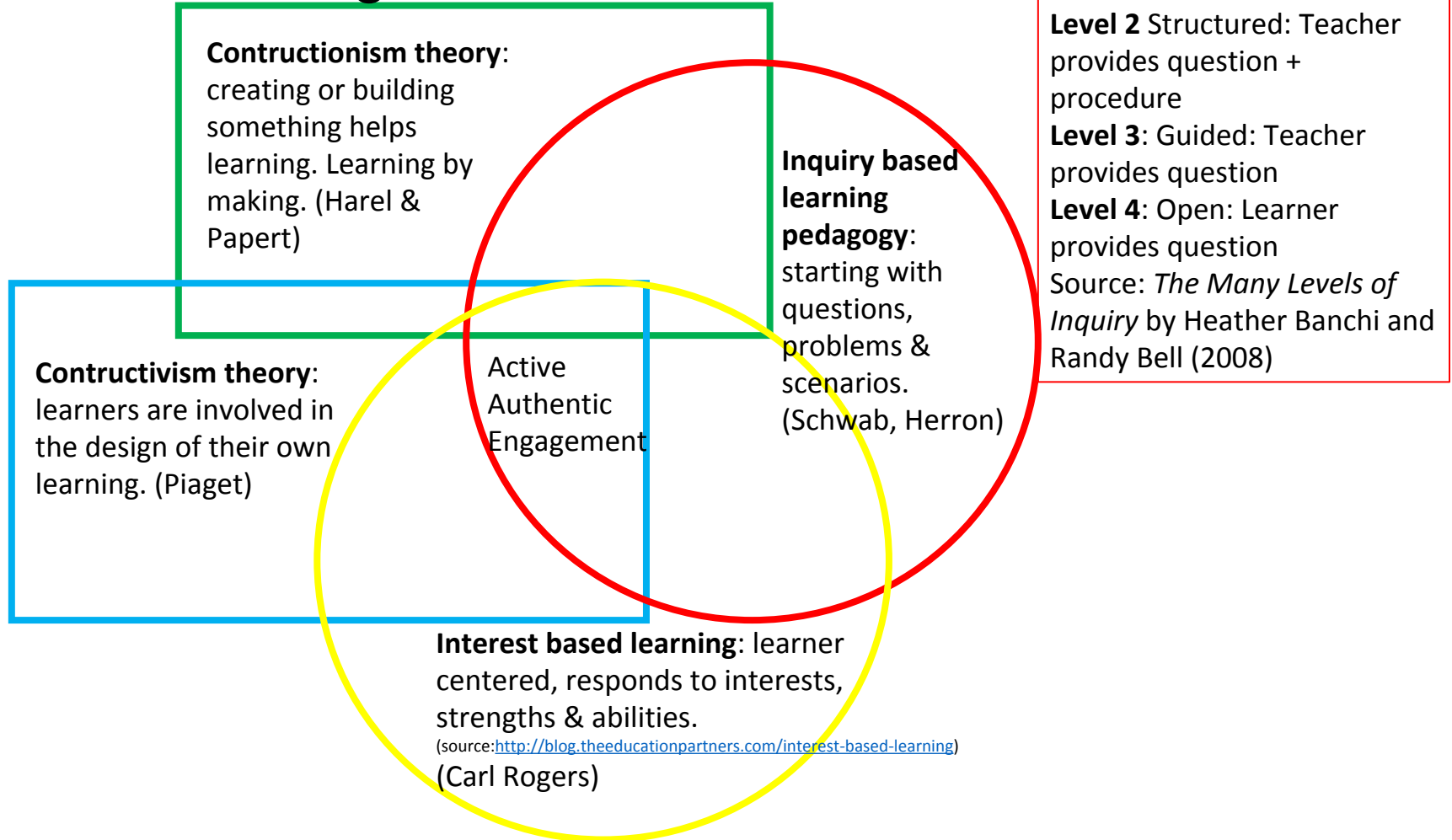Goal: Familiarity with technology concepts

Robot Fashion Show

Goal: Familiarity with coding concepts

Workshop Goal: Experience interest & inquiry based learning

Theoretical Background

Contructionism theory: creating or building something helps learning. Learning by making. (Harel & Papert)

Inquiry based learning pedagogy: starting with questions, problems & scenarios. (Schwab, Herron)

Contructivism theory: learners are involved in the design of their own learning. (Piaget)

Active Authentic Engagement

Interest based learning: learner centered, responds to interests, strengths & abilities.
(source:http://blog.theeducationpartners.com/interest-based-learning)
(Carl Rogers)

Level 1 Confirmation: known
Level 2 Structured: Teacher provides question + procedure
Level 3: Guided: Teacher provides question
Level 4: Open: Learner provides question
Source: *The Many Levels of Inquiry* by Heather Banchi and Randy Bell (2008)

Getting to know you
Go to: www.menti.com Code: 55 64 45

Design Thinking Activity

In a small group…

-   Choose a random SILLY word and TECHNOLOGY word

In the next 15 minutes...

-   Brainstorm a product or service that will make life better AND combines the two words.
-   Develop a prototype of your idea using the materials provided
-   Develop a pitch for your idea aimed at a large technology investor (e.g., Google)

Introducing Dash and Dot

- Made by Wonder Workshop (early Kickstarter).
- At least one pair live at each branch of EPL.
- Programmed with Blockly.
- Learn-to-code robots for 6 - 14 year olds, or anyone who loves cute robots.

With a small group, work together through the exercise to learn the basics movements, actions, and logic to animate the robots.

Image: Wonder Workshop, Inc.

Dash and Dot Exercise using Blockly app

1. Make Dash move forward.
2. Add a command to make Dash move backwards.
3. Add a command to make Dash talk or laugh after movements finish.
4. Make Dash move in a triangle.
5. Make Dot trigger when Dash starts the triangle.

6. Make Dash repeat the triangle, without repeating the movement blocks.

Drive

Sound   Animations

Start

Control

START ▶

Images: Wonder Workshop, Inc.

Robot Fashion Show

With a small group…

- Select an iPad Mini and a Dash robot.
- Choose a favourite literary character. Design a costume **inspired** by that character for your Dash (and optionally Dot) using materials provided.
- Design a stylish "catwalk strut" for your Dash, that must include:
    - 1 event activated by Dot
    - 2 changes in direction
    - 1 "signature move"
    - 1 loop

If you get stuck...
- Have you tested it yet?
- Has another group figured it out?
- Is there a code example online?
- Check in with the facilitators!

Character Ideas

Hermione Granger - Harry Potter

Doc Brown - Back to the Future

Zoolander

Minions

Jackie Kennedy

Vivian - Pretty Woman

Mary Poppins

Nina - Black Swan

Lady Gaga

Beyonce

Furiosa - Mad Max

Juliet

Dorothy - wizard of oz

Little Red Riding Hood

Rose - Titanic

Padme Amidala - Star Wars

Reflection Questions - www.menti.com   55 87 99

- Which interests of yours were you able to pursue today?
- What challenges or problems did you overcome?
- What is one thing you are going to try in your instruction?
- What did you find most enjoyable about the workshop today?
- What did you learn to avoid or what would you do differently if implementing a similar activity in your context?

Facilitation Techniques

- Focus on learner's questions and interests
  - Leave room to respond to these
- Provide a balance of structure vs. room for creativity
  - Boundaries help creative thinking
- Position learners as teachers
  - Ask those who know, or discover, to share
- Self-reflection/assessment
  - Ask learners to identify what they learned
  - Ask learners to identify what others (peers) learned

Thanks for joining us today!

Any questions?

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