DIGITAL CAPABILITIES WORKSHOP: FACILITATOR GUIDE

This toolkit helps you run workshops to support educators learn how to incorporate the Digital Affordance Developmental Learning Model into their teaching.

The toolkit provides a guide, ideas and resources for running a 1-2 hour workshop covering the following topics:

- An Introduction to the Learning Model
- Digital Descriptors for Your Subject
- Using the Learning Model in Your Teaching

HOW TO USE THIS TOOLKIT

The topics in the workshops build on each other but can also be adapted to stand on their own. For example, you could run a workshop on just using digital descriptors or run one workshop on an introduction to the model to familiarise and another that focuses on hands on application.

For each topic, we suggest a content structure and provide ideas for discussion and activities plus further resources for participants. We have also included sample slides for each topic, that you are free to use as is or to incorporate into your own template.

The suggestions in this toolkit are by no means prescriptive! You can see the toolkit as a menu that you can choose parts from (or add your own) to put together your own workshop.

This toolkit is very much a prototype. It is just a starting point and we encourage you to adapt, change and build upon the resources for your own context and needs.

And if you create your own examples and tools, please let us know - we'd love to share them on this website!

WORKSHOP TOPICS

PART 1. INTRODUCTION TO THE LEARNING MODEL

Aim:

- Discuss what the learning model is and why it was developed
- Explore how the learning model could be applied broadly and in your own situation

Resources:

- *Sample Slides* (Entire Workshop – Parts 1, 2 and 3)
- *Part 1 Handout*

Suggested content structure:

1.1. Provide a brief overview of how the learning model was developed.

This learning model was developed as part of the Australian Technology Network of Universities (ATN) funded project *Digital work practices: where are the jobs, what are they, and how prepared are graduates?* The learning model can be applied potentially across disciplines.

The project was led by A/Professor Fiona Peterson, School of Media and Communication, RMIT University. The Project Partners were RMIT University, Queensland University of Technology, and University of Technology Sydney.

Digital Capabilities Descriptors for practice domains (e.g., Data) were developed and defined through a multi-method and iterative process that included analysis of graduate data, literature review, industry roundtables, student and educator surveys, educator reflections and workshops, as shown in Figure 1. Digital Capabilities Descriptors were developed for samples of Journalism, Design, Engineering and Music Industry.

Industry roundtables identified that data is a key topic - generating data but especially making sense of data to inform strategic decision making AND customer experience/engagement. Grappling with Artificial Intelligence (AI) and Machine Learning (ML) has also emerged as a significant issue - requiring Adaptive digital capability which is in high demand but short supply.

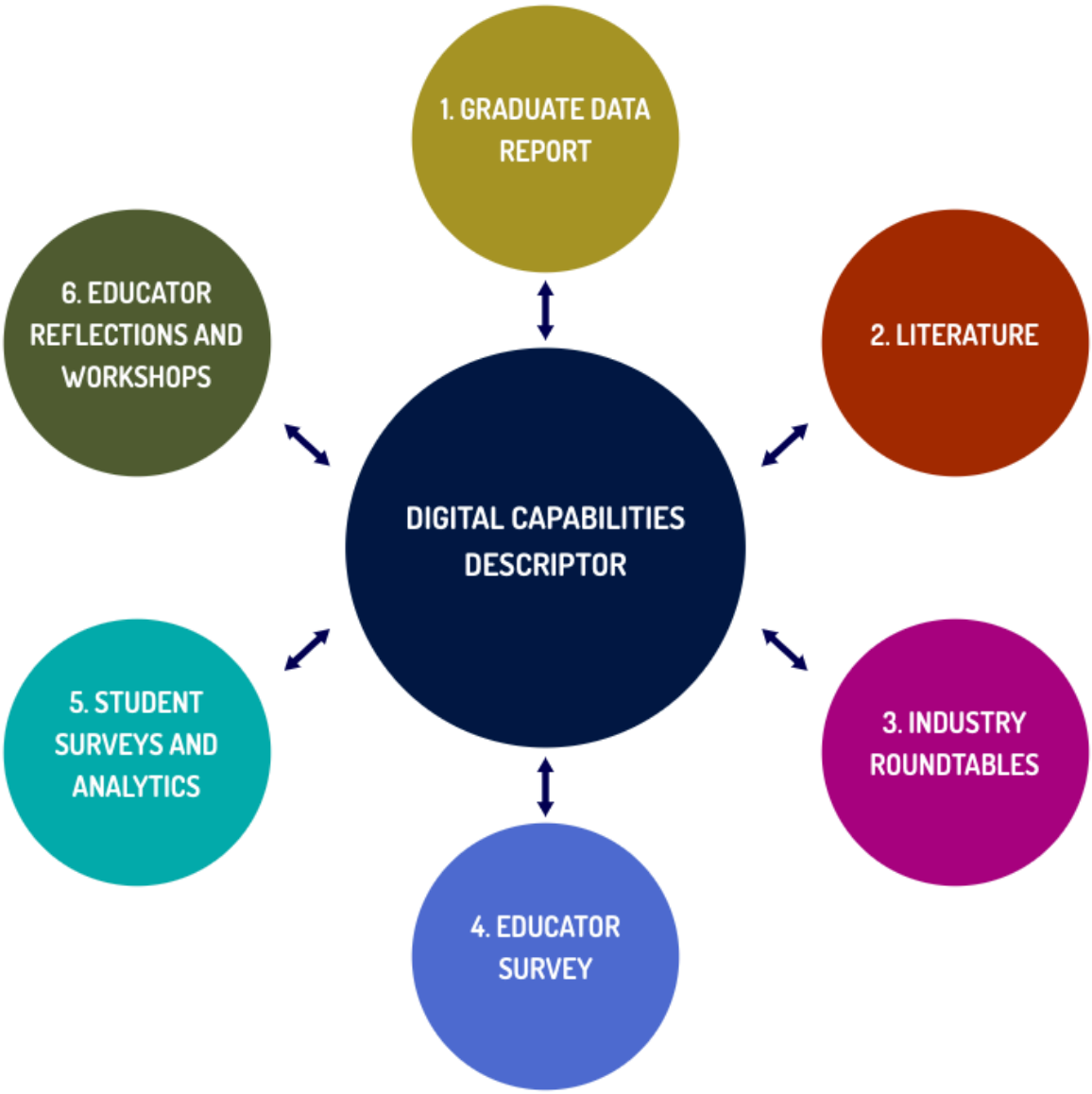

Figure 1: Development and Refinement of Digital Capabilities Descriptors

See the following project reports for more information:

- *Digital futures: what employers want from graduates* (Industry Roundtables 1-4 Report)
- *'Connecting the dots' between industry and higher education: the evolving landscape of digital work* (Industry Roundtables 1-5 and Employment/Labour Insights Data Report)

1.2. Walkthrough the key parts of the learning model

Resources

- *Positioning graduates for digital work futures* (Learning Model and Student Pilots Report)
- *Key Findings* website page

The Digital Affordance Developmental Learning Model connects digital work practices to the curriculum, through mapping Digital Capabilities Descriptors written in consultation with industry. The Descriptors interpret digital work practices through technology affordance lenses (Functional, Perceptual and Adaptive) for developmental learning about digital work practices.

Graduates who have developed Adaptive digital capability, in particular, potentially have a competitive advantage for graduate employment. Adaptive digital capability is in high demand and short supply, according to the analysis undertaken in this project.

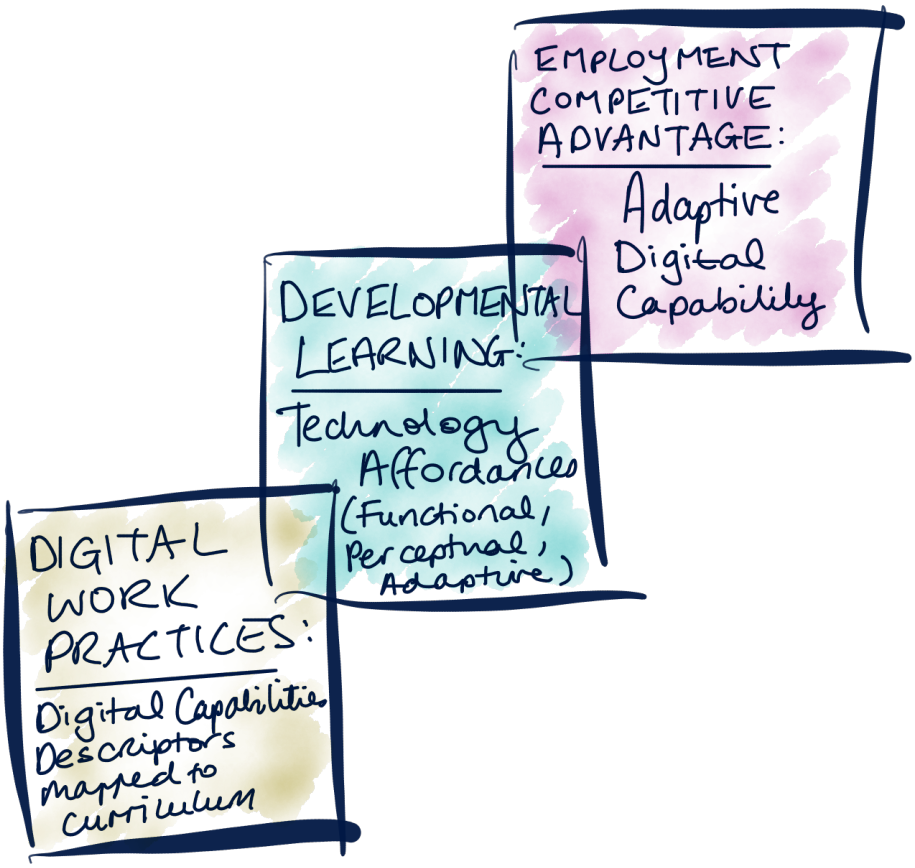

Figure 2: Digital Affordances Developmental Model

Present the project's DEFINITION of 'digital capabilities':

- 'digital capabilities' include the knowledge, skills and attributes required for a user to interact productively with technology.

DISCUSS how "digital capabilities" are viewed by participants.

What does "digital capabilities" mean for you, in your context?

Introduce the Digital Affordances model. The model is designed for learners to make the most of technology, by learning to integrate three types of digital affordance/capability: Functional, Perceptual and Adaptive. These come together to build Innovative Digital Potential.

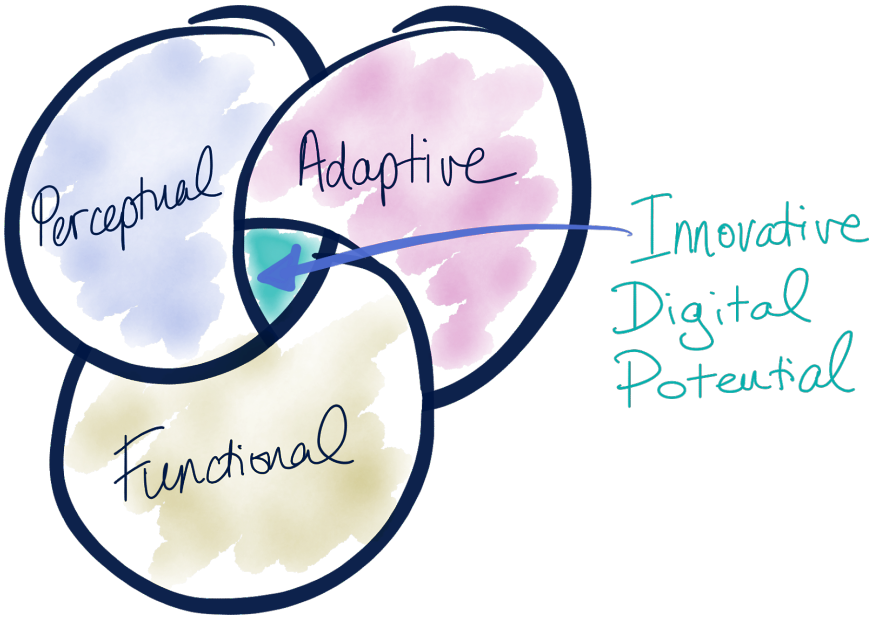

Figure 3: Digital Affordances

Then, define each of the affordances:

- **Functional affordances** relate to the operation of technology; this includes naming, knowing and operating the features of a technology/technologies to perform tasks.
- **Perceptual affordances** relate to interpretation and being discerning about technology tools and practices for their suitability and in-context operation for outcomes in **known contexts**.

- **Adaptive affordances** relate to imagining, adapting and extending technology use in **previously unexplored and emerging contexts for innovative outcomes**; this requires some functional knowledge/skills and perceptual experience.

  Highlight that the difference between Perceptual and Adaptive affordances is that the former are related to outcomes in **known** contexts, while the latter are about working with imagination towards innovative outcomes in **new and emerging contexts**.

A key finding of the project is that many times educators and students are focusing on the functional, rather than perceptual and adaptive - even though it is adaptive capability that is most valued by industry.

We need to avoid assumptions about students as digital natives and therefore functional needs to be addressed. However, for the full Innovative Digital Potential goal of Adaptive to be realised, some functional knowledge/skills + perceptual experience are required. This may involve knowing enough to work with specialists, rather than having well developed Functional skills oneself.

Walkthrough an example/s of digital affordances to illustrate what they mean in practice.

- See *Digital Descriptors* webpage

Note that this model is NOT just LINEAR. Over time, the learner ideally develops digital capabilities across these three hierarchical but integrated layers.

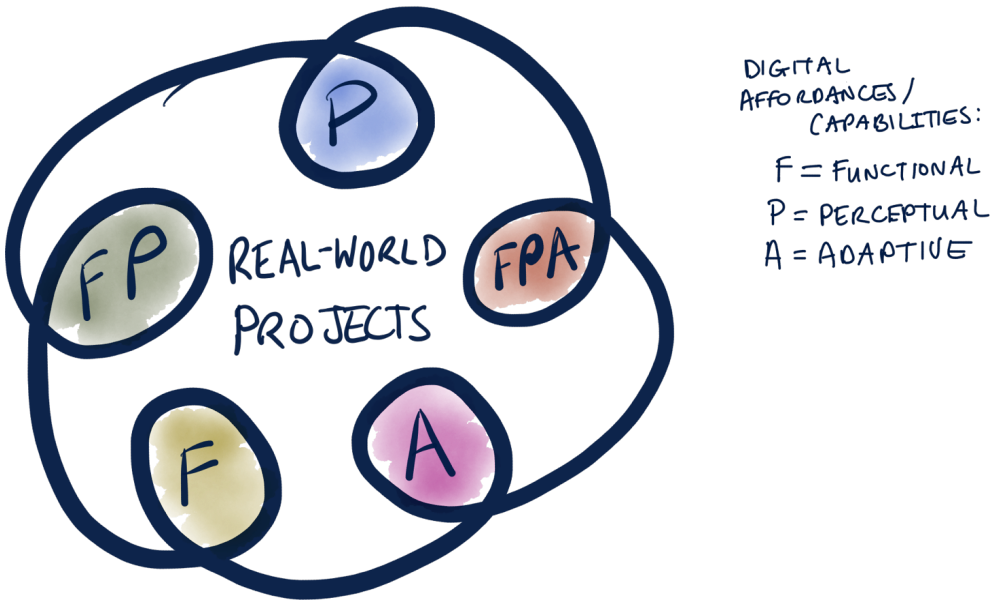

Figure 4: Reflection-in-Action for Building Adaptive Capability

Reflection-in-action (Schön 1983) is integral to this learning process.

1.3. Introduce examples/case studies of where educators have used the model

- For examples, see the *teaching resources* page website.

1.4. Discuss the changes to your industries and how the learning model might be useful in your context.

Ideas for discussion questions:

- What's happening with your industry/discipline? How are work practices changing?
- Do you think we are sufficiently preparing students for the future of work?
- How could we better prepare students?
- Do you think thinking about digital capabilities in this way (using digital affordance lenses) could help you in your teaching?
- How might you use this learning model in your teaching?

Note: If you are running the topics as separate workshops, consider ending the workshop with invitation to do workshop 3, which focuses on application of the model including assessment - that was highlighted as a challenge by many colleagues at the Educator Workshops, especially for Adaptive digital capability.

PART 2. DIGITAL DESCRIPTORS AND YOUR SUBJECT

Aim:

- Practise how to use or adapt digital descriptors
- Explore ways to develop digital descriptors

Depending on the context and discipline, the existing descriptors developed in the project can be used, they can be adapted, or new descriptors can be created.

Consultation with industry is recommended.

Workshop Resources

- *Sample Slides* (Entire Workshop – Parts 1, 2 and 3)
- *Digital futures: what employers want from graduates* (Industry Roundtables 1-4 Report)

Handouts:

- *Digital Descriptors and Your Subject*
- *Example Digital Descriptors*
- *Digital Descriptor Templates*
- *Digital Affordance Cards*

Suggested content structure:

2.1. Provide an overview of different ways to develop digital descriptors for subjects.

You don't have to create Digital Descriptors from scratch. The project has developed a number of digital descriptors for domains across Journalism, Design, Music Industry, and Engineering. You can check these first to see if any are relevant. You can use these as is or adapt them for your subjects.

If there isn't an existing digital descriptor, you can create your own for key domains in your discipline.

2.2. Walkthrough the process to develop Digital Descriptors

Present an example/s of digital capability descriptors.

Walkthrough the project's method of building the Digital Capabilities Descriptor model.

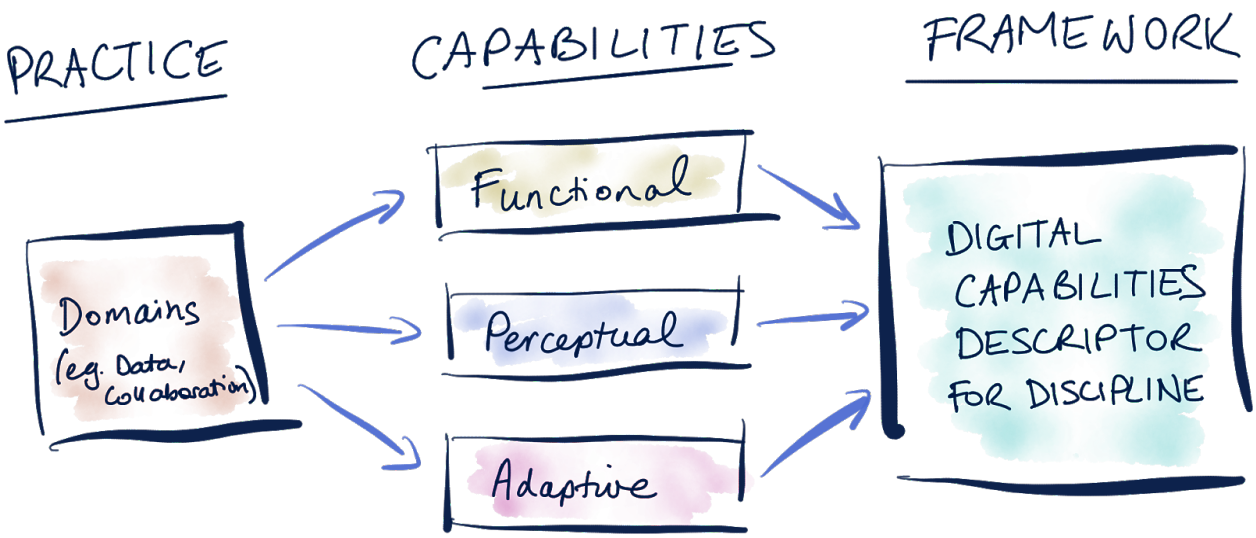

Figure 5: Building the Model

The process to develop Digital Capabilities Descriptors for your program/subject is to:

1. Identify key domains that are relevant to your program/subject in your discipline's work practices that are critical to students' job readiness
2. Check to see if there are existing digital descriptors that fit or could be adapted
3. If there are no existing digital descriptors, then identify the functional, perceptual and adaptive affordances of each domain

2.3A. Participants select domains from existing descriptors

Participants to familiarise themselves with the existing descriptors and select which ones are relevant to their subjects.

Prompt: Which of these digital capabilities are most important in your program/subject?

Participants to look through existing domains and select which are relevant.

Review the digital affordances for each selected domain and discuss on tables whether/what adaptation is required.

2.3B. Participants identify key domains for subject and develop digital descriptors

Note: that you can just do activity 3A or you can extend it by having participants create their own digital descriptors

Prompt: What digital capabilities are most important in your program/subject?

Participants to write down 3 domains of digital capability for their graduates.

Encourage participants to share their domains with their tables and/or the workshop group

Participants to take each domain (or select one domain) and write down what might be the functional, perceptual and adaptive affordances.

- *Digital Affordance Cards*

Ideas for further discussion questions:

- How do you currently engage with industry?
- What are ways that you could consult and engage industry in identifying domains and updating or developing digital capability descriptors?

PART 3. USING THE LEARNING MODEL IN TEACHING

Aim:

- Develop ideas for how to apply the learning model to your curriculum and lesson planning
- Apply digital descriptors to adapt or create Subject Learning Objectives (SLOs)
- Explore ideas for assessing digital capabilities
- Discuss strategies to implement the learning model in your current practice

TIP: Ask participants to bring along their Subject Outlines with Subject Learning Objectives to the workshop.

NB clarification of terms may be needed - some universities use the term ‘Unit’ or “Course’ rather than ‘Subject’ and use the term Course Learning ‘Outcomes’ rather than ‘Objectives’

Workshop Resources

- *Sample Slides* (Entire Workshop – Parts 1, 2 and 3)
- *Part 3 Handout*

Suggestions for content:

3.1. Provide an overview of ways the learning model can be used in teaching

For example, the Digital Capabilities Descriptors can be used in different ways, such as:

- guiding the design of assessment and learning activities to enhance existing curriculum
- guiding new program and course/unit development
- guiding teaching plans focused on particular technology

Note that the three layers of Functional, Perceptual and Adaptive are hierarchical but integrated. It is vital that students are encouraged to reflect on and discuss the scaffold in relation to their own digital capabilities and practices for work futures.

Illustrate this iterative process with the Digital Affordance Developmental Learning Model in action:

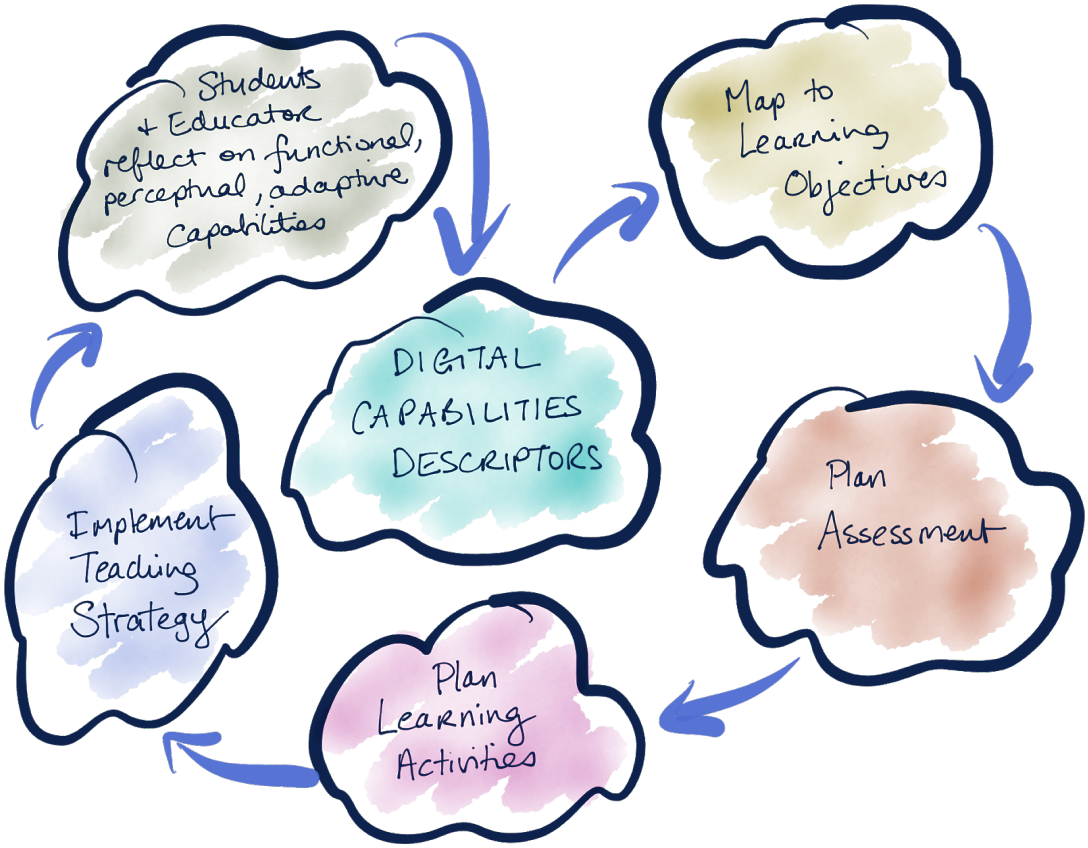

Figure 5: Digital Affordance Developmental Learning Model in Action

3.2. Practise applying digital descriptors to adapt or create Subject Learning Objectives/Outcomes (SLOs)

If participants haven't already identified the digital descriptors relevant to their subject (Topic 2 above), ask them to look over the list of domains. Choose 1-3 relevant domains and read over their digital capability descriptors.

Ask them to review their Subject Learning Objectives/Outcomes individually and identify Descriptors that are a good fit and could be incorporated in learning activities/assessment. Can the Objectives/Outcomes be used as is or do they need to be adapted (subject to local approval process)?

Participants share and discuss the process of mapping Objectives/Outcomes to Descriptors.

3.3. Develop ideas for assessing digital capabilities

- Show examples of how the project subjects assessed digital capabilities. Example questions can be found on the *project website*.
- Participants to choose one domain.
- Group together participants who have chosen the same or similar domains.
- With participants in their domain groups, brainstorm ways to assess functional and perceptual affordances - that is in known contexts. (This may require first identifying what are known contexts relevant to their subject.)
- Then still in domain groups, participants to brainstorm ways to assess adaptive capability.
- Participants to share back ideas with the rest of the workshop group.

Discussion prompts: stage of learning, learning outcomes required, time available, industry partners required, resources needed and possible

3.4. Workshop ways to apply the learning model to curriculum and lesson planning

- Show example/s of using the learning model in teaching. *Case studies and teaching resources* can be found on the website.
- Discussion prompt: What are ways that you could apply the learning model to curriculum and lesson planning?
- Activity: Apply the learning model to curriculum and lesson planning
- With participants still in their domain groups, participants to brainstorm ways that they can support their students developing that domain on a functional, perceptual and adaptive level.
- Participants share their group's ideas back with the rest of the workshop group.

You can also prompt educators to consider and discuss:

- What are ways that you build in reflection with your students during and after learning activities?
- Are there 'wicked problem' projects students could work on across disciplines to help develop their Perceptual and Adaptive digital capabilities?

3.5. Discuss next steps and implementation

Go through factors that shape our capacity to support learners in developing digital capabilities - these emerged through the project educator survey:

FACTORS WHICH CONTRIBUTE	FACTORS WHICH CONSTRAIN
- Access to technology and software	- Insufficient resources
- Technology enabled teaching spaces	- Lack of institution support
- Their own capabilities and experience	- Lack of time or capacity to develop own capabilities
- University support services	- Large class sizes
- Research on digital technologies	- Lack of Professional Development activities related to new technologies
- Research on industry needs	
- Professional Development time	
- Use of industry experts in teaching activities	

Discussion prompts:

- How does your current situation support learners in developing digital capabilities?
- How does your current situation constrain learners in developing digital capabilities?
- What is the first thing you would need to do, to make the model work for you with your students

Consider ending the workshop with each educator choosing what is the next step they could take to implement the model in their teaching.

Further Resources

Reports:

- *Digital educators teaching digital natives? The challenges of developing digital capabilities in a Higher Education context* (Educator Survey Report)
- *Translating digital capabilities: using affordance theory for a developmental learning model across disciplines* (Educator Workshops Report)

- *Digital futures: what employers want from graduates* (Industry Roundtables 1-4 Report)

- *Employment trend data: where are the jobs?* (Employment/Labour Insights Data Report)

- *'Connecting the dots' between industry and higher education: the evolving landscape of digital work* (Industry Roundtables 1-5 and Employment/Labour Insights Data Report)

- *Positioning graduates for digital work futures* (Learning Model and Student Pilots Report)