

Card Sorting and Visual-Spatial Problem Solving

By working in a visual medium, card sorting uses our brain's ability to perceive and attach meaning to space. It's easier and more natural than a word document. Through the use of sticky notes, ideas can be quickly created and moved. We create meaning by grouping like content to structure disparate pieces into a coherent whole. This is used in the workbooks to organize content and plan the timing of activities.

HOW TO USE THIS TOOLKIT

This toolkit can be used and adapted as best fits your practice. Some educators use only the lesson plan canvas, leaving the other workbooks for reference.

Select a single class session to plan for. This toolkit is better suited for short term planning, as opposed to an entire course.

In workbook 2, answer the core questions and revise as necessary.

In workbook 3, unfold the lesson plan canvas in a place where it will remain visible.

In workbooks 4-7, consider the context questions on the cover, then follow the activities within. There is no particular order to the workbooks, though many begin with objectives. As the lesson plan becomes more complete, revisit previous sections and make adjustments.

When a lesson plan has come together, use workbook 8 to critique and make further adjustments based on its insights.

Workbook 9 is used after a lesson to reflect and propose changes for the next time the lesson is given.

1: INTRODUCTION

Introduction to design methods and their role in lesson planning.

THE
LESSON
DESIGN
TOOLKIT

WHAT IS THIS?

The classroom is a curated experience. Educators are asked to create experiences as they plan their lessons, yet they often do not have the background skills to succeed in these complex, messy, ambiguous situations. As their experience grows, they eventually find effective lesson design methods of their own. But until this experience is gained, early-career educators often feel overwhelmed to plan lessons without the requisite design skills.

Because discovering what works takes each person years to develop, early-career college educators find themselves anxious and overwhelmed. There's so much to do, so much to learn, and not enough time to deeply consider one's own teaching practice. Without experience, planning a lesson is a difficult task to even complete, let alone execute well. Planning is not necessarily an intuitive skill to learn, but early-career educators are nonetheless asked to develop their teaching methods in isolation, reinventing what is already understood by their more senior peers.

Lesson planning is a design problem that can benefit from design methods and by making existing pedagogy more accessible. This situation calls for a toolkit to help early-career college educators effectively design lessons without the benefit of extensive experience.

This toolkit takes methods from experience design and adapts them to planning in an educational context. The design methods demonstrate how planning for education is a design challenge and benefits from the use of design methods.

The toolkit begins by exploring the context of the lesson and considering how the components relate to one another. From this base of understanding, four workbooks focus on objectives, assessment, content, and activities. Critique and reflection activities help to iteratively improve the lesson plan and incorporate learnings into future planning.

THE WORKBOOKS

The included workbooks demonstrate how design methods can be applied to the core components of planning in education: lesson objectives, assessment activities, content organization, and teaching activities. The workbooks make use of the following design methods:

Exploring And Defining The Problem Space

When working with complex problem spaces, we don't have clear inputs and outputs. By exploring and questioning the context of the lesson, the root problems can be discovered and defined clearly. This requires moving forward in ambiguous circumstances and without enough information to make perfect decisions. We make tentative guesses about what the problem might be, use this to inform possible solutions, then revisit and revise.

Alternative Generation and Converging

The first solution to any problem is seldom the best. By generating many alternative solutions to a problem, we can assess the benefits of each and combine the best parts into a better course of action. This process forms the first stage of each workbook.

Iteration Through Prototyping And Testing

Planning problems are often too complex to be addressed all at once and in a linear manner. They require improvement through multiple iterations, each time developing quick prototypes to assess and inform future solutions. Low fidelity prototypes are faster and less precious than fully realized solutions, making them easier to change or discard as needed. The first iteration of a solution takes the pressure off and allows assessment at an earlier stage than in a traditional product. By following a diverging-converging cycle of idea generation and specific solutions, viable options are created and improved without spending much time on failed options. These workbooks help generate high level ideas to be constantly revised as new insights are gained.