DESIGNERLY METHODS IN INSTRUCTIONAL DESIGN

The Classroom is a designed experience. Educators preparing their courses share similar processes as product designers. This research explores the parallels in challenges and methods experienced by both designers in practice and teachers planning for the classroom. Design interventions will apply designerly methods to improve lesson planning.

Instructional design is the process of planning for and developing instructional products and experiences. This can include strategic level decisions like course objectives and assignments, but also tactical decisions in day to day activity planning.

Instructional design is design, and would benefit from the designerly methods of discovery, problem framing, prototyping, and iteration.

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HOW CAN DESIGN INFORM THE INSTRUCTIONAL DESIGN PROCESS?

WHAT PRODUCT DESIGNERS DO

Product design uses a structured, iterative approach to creating experiences. Well adapted for ill-defined, ambiguous problem spaces, the practice emphasizes problem framing, iteration, and tolerance of a messy, non-linear process. The convergent-divergent phases of the double diamond process demonstrate a need for both generative problem exploration and focused problem solving. This process places equal importance on both *solving the right problem* and *solving the problem right*.

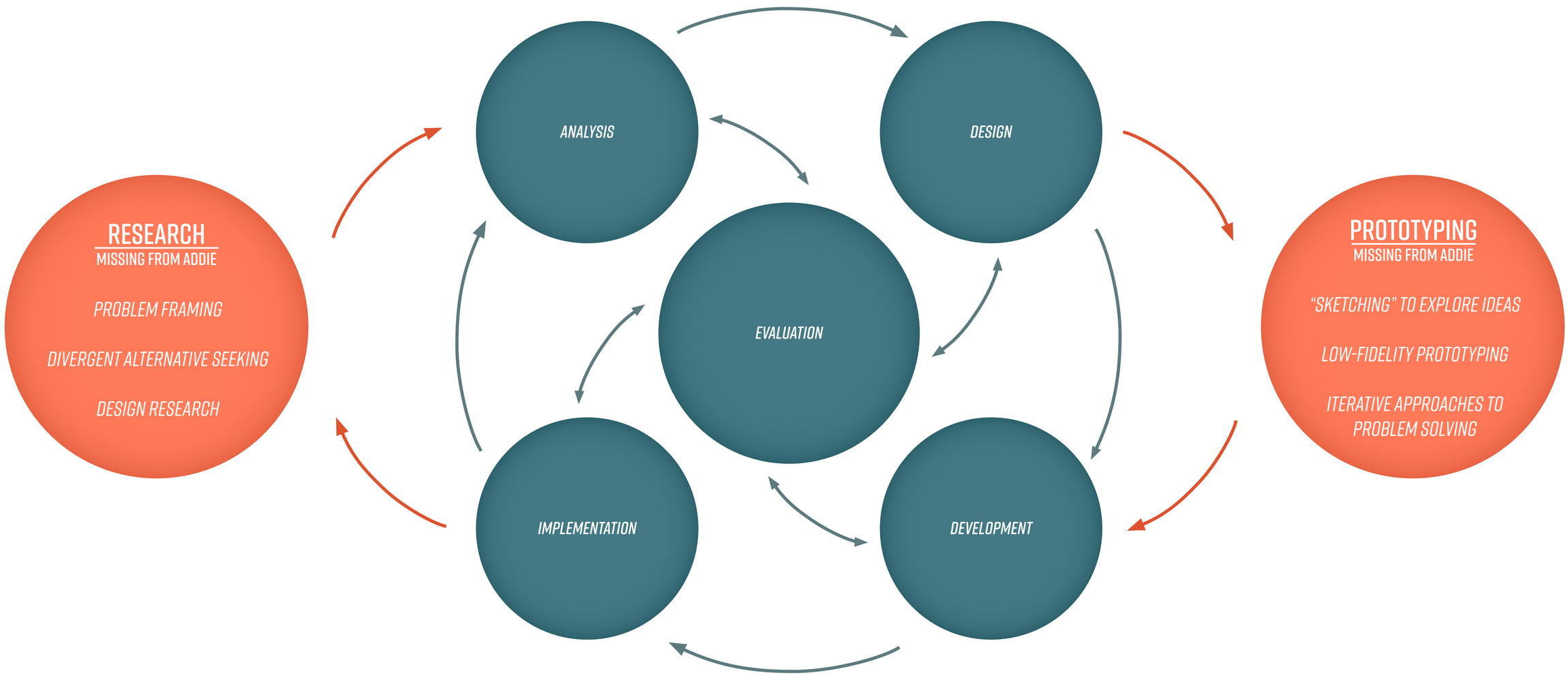
WHAT EDUCATORS DO

An educator's work comprises far more than the time spent in a classroom. The core activities of an educator are planning, teaching, and evaluation. The planning process draws upon instructional design frameworks, but like product design, also relies on experience and intuition.

Plans and materials are iteratively improved with each use. Many aspects of a course are prepared well in advance, such as learning objectives and assignments. Plans are also made in the days shortly before a class meeting. These are often adjustments to existing plans, or plans at a higher level of detail than had been earlier prepared. This allows for adaptation to student progress and other situational factors.

THE ADDIE MODEL
OF INSTRUCTIONAL DESIGN

Many instructional design models are based on ADDIE. This popular planning framework emphasizes iteration and evaluation of outcomes.



INSTRUCTIONAL DESIGN FRAMEWORKS ARE MISSING TOOLS TO ADEQUATELY SUPPORT DESIGN ACTIVITIES

Exploration, problem setting, and divergent thinking are present in observed teaching practice, but existing models of instructional design don't adequately support these aspects of the instructional design process.

ADDIE and similar frameworks present planning activities as a cyclical, linear process that is only interrupted by evaluation. In reality, planning is messy. Educators may change outcomes near the end of their process, having only come to understand their objectives by creating plans. Without problem exploration, the first viable solution may be developed, having not identified superior options. Detailed plans may be discarded if the problem space is not adequately explored and understood, wasting time.

Teaching plans are altered over time, improving with each year. Initial versions of a class are often of substantially lower quality than subsequent iterations. The inability to effectively iterate a teaching plan before presenting to a classroom is a gap in the instructional design process.

INSTRUCTIONAL DESIGN COULD BENEFIT FROM DESIGN'S DISCOVERY, PROBLEM FRAMING, AND PROTOTYPING FRAMEWORKS

My research has indicated a frequent lack of exploration in initial planning. From first assumptions, activities follow a converging process without sufficient exploration of the problem space. Objectives are often not known in advance, or only recognized after preparing a lesson. By recognizing the creative process that takes place before objective setting, educators can be supported in finding the most meaningful problems and outcomes.

Iteration is an essential tool for educators. Lessons are adapted and improved each time they are used, combining evaluation and reflection to enhance learning outcomes. Educators often express regret that their students must experience a first iteration of their course, knowing it will be improved in subsequent versions.

DESIGN METHODS CAN HELP EDUCATORS PREPARE MORE EFFECTIVELY

I'm leveraging designerly tools toward improving instructional design, specifically to help new postsecondary educators effectively design lessons and plan courses without the benefit of extensive experience.

Given that instructional design is an intuitive process based on experience, an intervention can either increase experience or improve design skills in discovery, framing, prototyping, and iteration.

Presenting a first draft of a lesson to a classroom is insufficient. This may be better supported through designerly methods of sketching and prototyping to create more iterations of steadily improving quality, all before stepping into the classroom.

My design intervention may take the form of any of the following:

- Prototyping tools to test ideas before they reach a classroom audience
- Conceptual sketching techniques to avoid working too specifically before outcomes are well understood
- Exploring the problem space, framing the problem, and generating alternatives,
- Distilling complex research findings into actionable next steps through insights, themes, and principles
- Designerly ways to save time by cutting what's not core and distilling toward simplicity