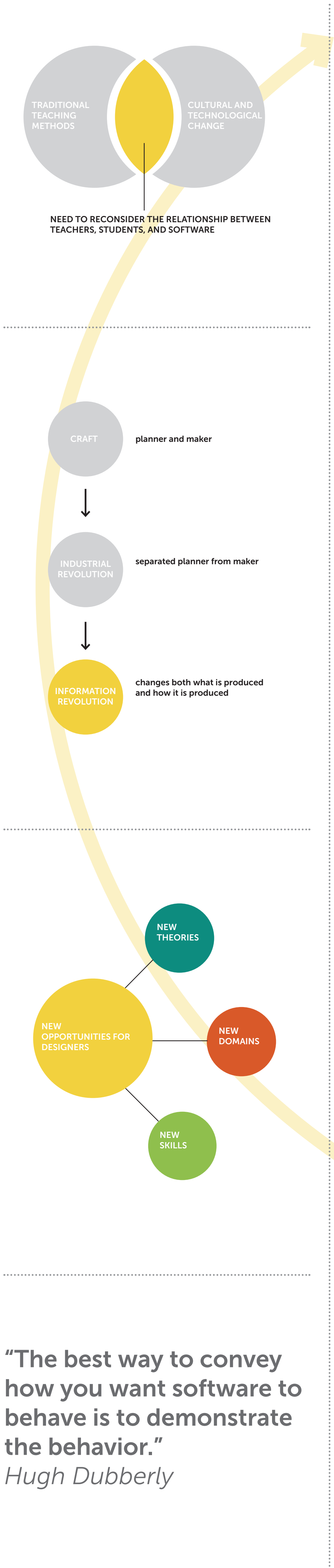# Responding to Change:
New opportunities for students in design education

Graphic and communication designers are responding to cultural and technological change. Along with these changes, we need to develop new theories, include new domains, and proficiency in new skills.

CONTEXT

TRADITIONAL TEACHING METHODS

CULTURAL AND TECHNOLOGICAL CHANGE

NEED TO RECONSIDER THE RELATIONSHIP BETWEEN TEACHERS, STUDENTS, AND SOFTWARE

CRAFT — planner and maker

↓

INDUSTRIAL REVOLUTION — separated planner from maker

↓

INFORMATION REVOLUTION — changes both what is produced and how it is produced

NEW THEORIES

NEW OPPORTUNITIES FOR DESIGNERS

NEW DOMAINS

NEW SKILLS

"The best way to convey how you want software to behave is to demonstrate the behavior."
*Hugh Dubberly*

PROCESS

establishing purpose
For students to deal with problems that accurately simulate the current role of graphic designers, they must look beyond the immediate need to uncover a need to design in the first place. Although approaching a project this way is fuzzy, these aspects of design are increasingly important. Teachers must ease up on constraints and instead foreground principles of design thinking to determine the best approaches in different scenarios. Constraints can help guide a student through a project, but in excess than guide student outcomes and restrict creative thinking..
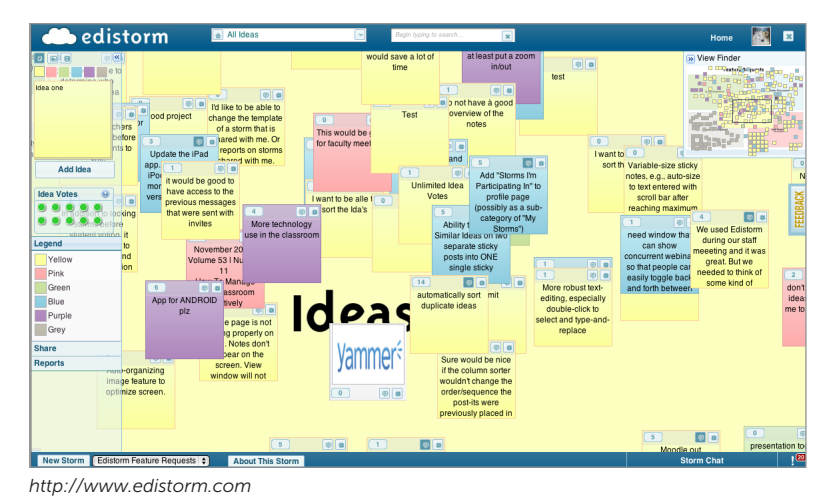
prototyping
After students have figured out what will be most appropriate to design, they need something that will allow them to articulate their thoughts quickly. Tools that easily allow students to articulate their visions for a project should be utilized. Clearly articulating the structure and content of experiences and interactions is complex; it takes many tries to arrive at a point a designer feels meet a project's needs. By iterating and evaluating often, students can show others their process and how they think. They can also show specific moments of insight and learning outcomes.
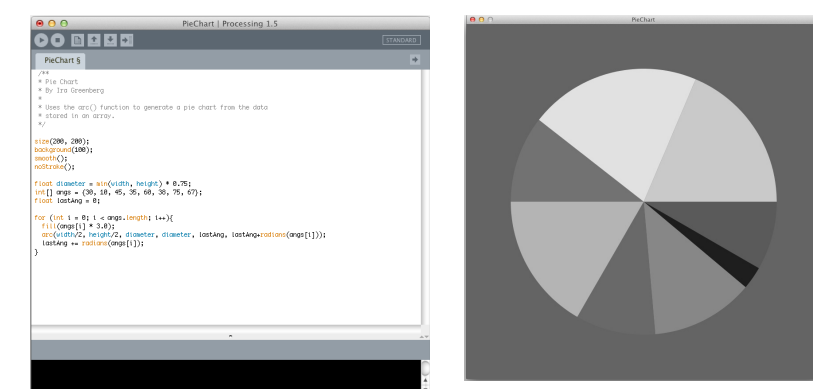
refinement and presentation
Following the development of prototypes, students and teachers can discuss the most appropriate choices for final presentation. Final work may need to be talked through, shown online, or act as an actual demonstration. Choices and reasoning need to be clear and intentional. In some instances, it may be that images do enough to explain the interaction and purpose of a design project. Because the demands of design projects often require some description of interactions or behaviors, certain projects may benefit from video demonstrations that illustrate what it might be like to use the project. Some projects may benefit most from having semi-functional or functional prototypes that allow anyone to experience their vision for the project. Teachers, conversing with students, should address desired outcomes and facilitate decisions about presentation methods.
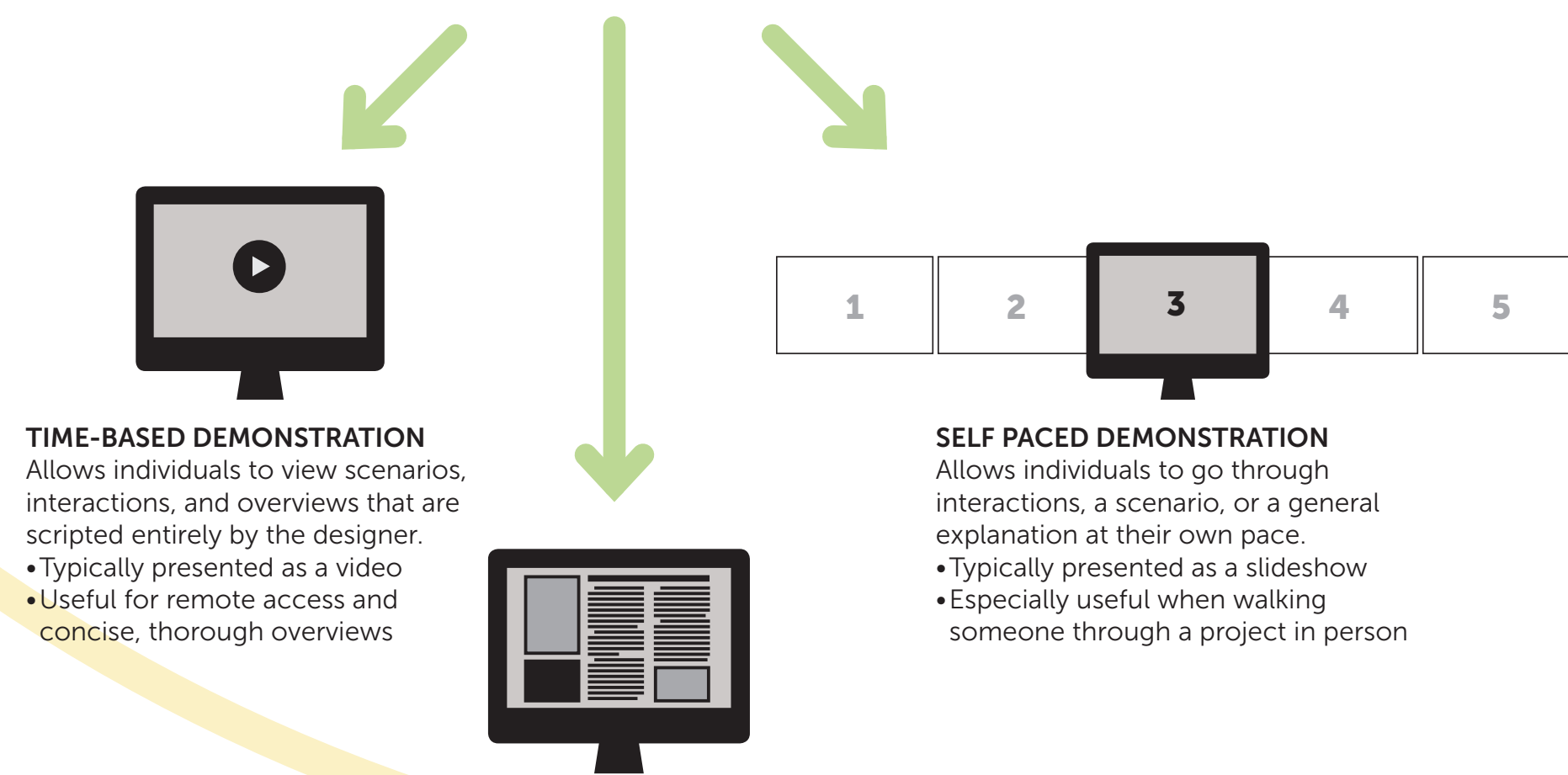
TIME-BASED DEMONSTRATION
Allows individuals to view scenarios, interactions, and overviews that are scripted entirely by the designer.
• Typically presented as a video
• Useful for remote access and concise, thorough overviews

1	2	3	4	5

SELF PACED DEMONSTRATION
Allows individuals to go through interactions, a scenario, or a general explanation at their own pace.
• Typically presented as a slideshow
• Especially useful when walking someone through a project in person

FUNCTIONING PROTOTYPE
Demonstrates behaviors through literal interactions with the project.
• Presented in a way that mimics the final outcome
• Effectively communicates with programmers and makes interactivity explicit
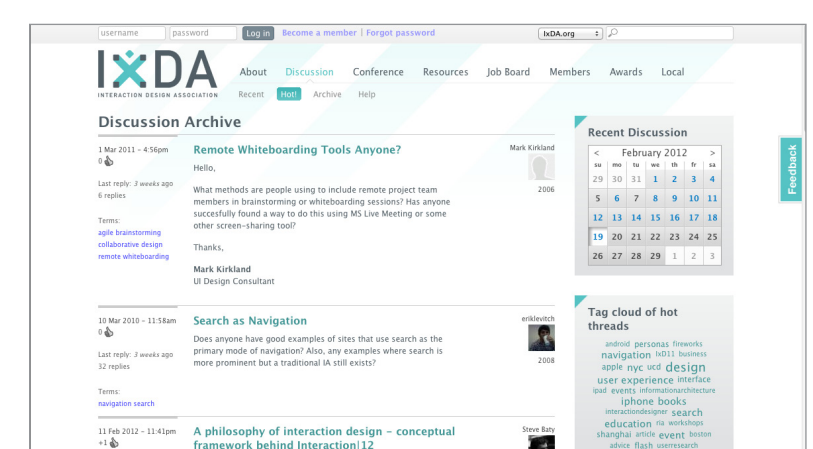
reflecting on choices
Considering the outcomes of different choices made in a specific project helps generate new knowledge and inform future practice.

CASE STUDIES

EDISTORM
Online collaborative work space with virtual 'sticky notes' that allow users to post and sort text, images, and videos. Ideas and notes can also be voted and commented on.
• Easily recreates methods like affinity diagramming
• Accommodates for remote collaboration
• Easily includes different mediums in a familiar format

http://www.edistorm.com

FLOWELLA
Provided by Nokia for designers to prototype Symbian applications. Makes simulating interactions from images on a mobile device fast and easy.
• Supports fast, iterative work
• Experience prototypes on the actual device

http://www.developer.nokia.com/Resources/Tools_and_downloads/Other/Flowella/

PROCESSING
Visually oriented programming language and development environment. Allows designers to work with code and is very flexible
• Develop conceptual understandings of programming
• Easily work with more complex data
• Strong community continues to add libraries and examples; open source.

http://www.processing.org

IxDA DISCUSSION FORUM
Platforms for design-specific discussion, like the Interaction Design Association's, are places where students can discuss their own processes and reflect on their development.
• Meeting point for designers (and students) with questions or insights
• Creates a larger network for student interaction

http://www.ixda.org/discussion