

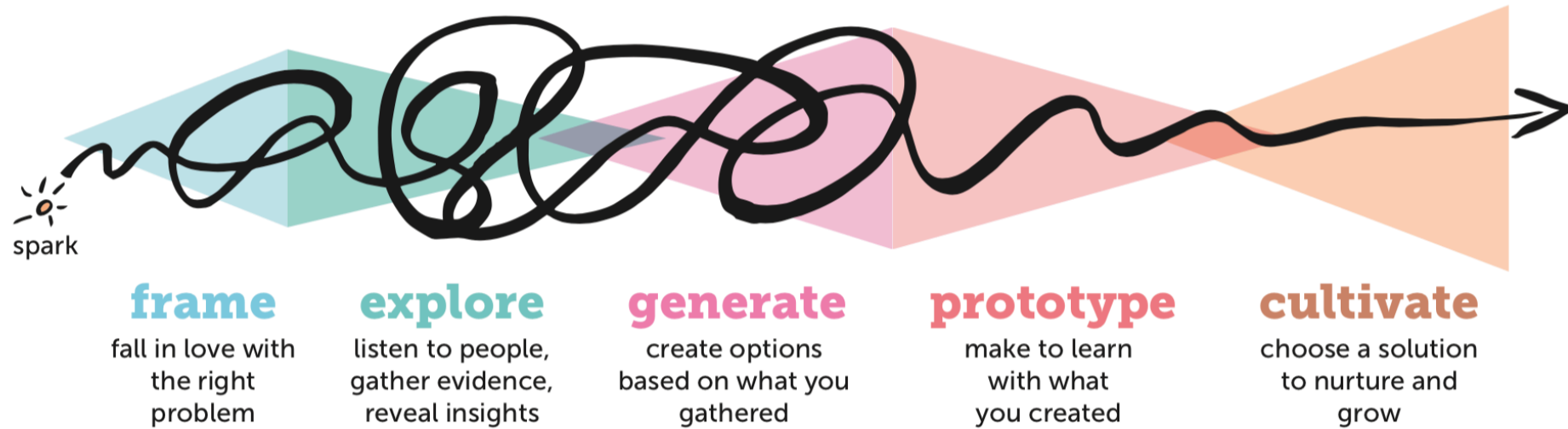
Design Thinking in Health Sciences: *Developing Solutions-Oriented Graduates Impacting Local Medical Communities Through Innovative Leadership*

TRACEY THURNES

GARDNER-WEBB UNIVERSITY

DOCTOR OF EDUCATION IN ORGANIZATIONAL LEADERSHIP

Design Process — Elon By Design



Background

Objectives

University

- Be one of the first institutions to implement the design thinking approach across curriculum
- Faculty and staff will add to their already extensive list of pedagogies
- Strengthen relationships with community partners through design thinking pop-ups in shared efforts to identify innovative ways to solve challenges the community and organizations are facing

Student

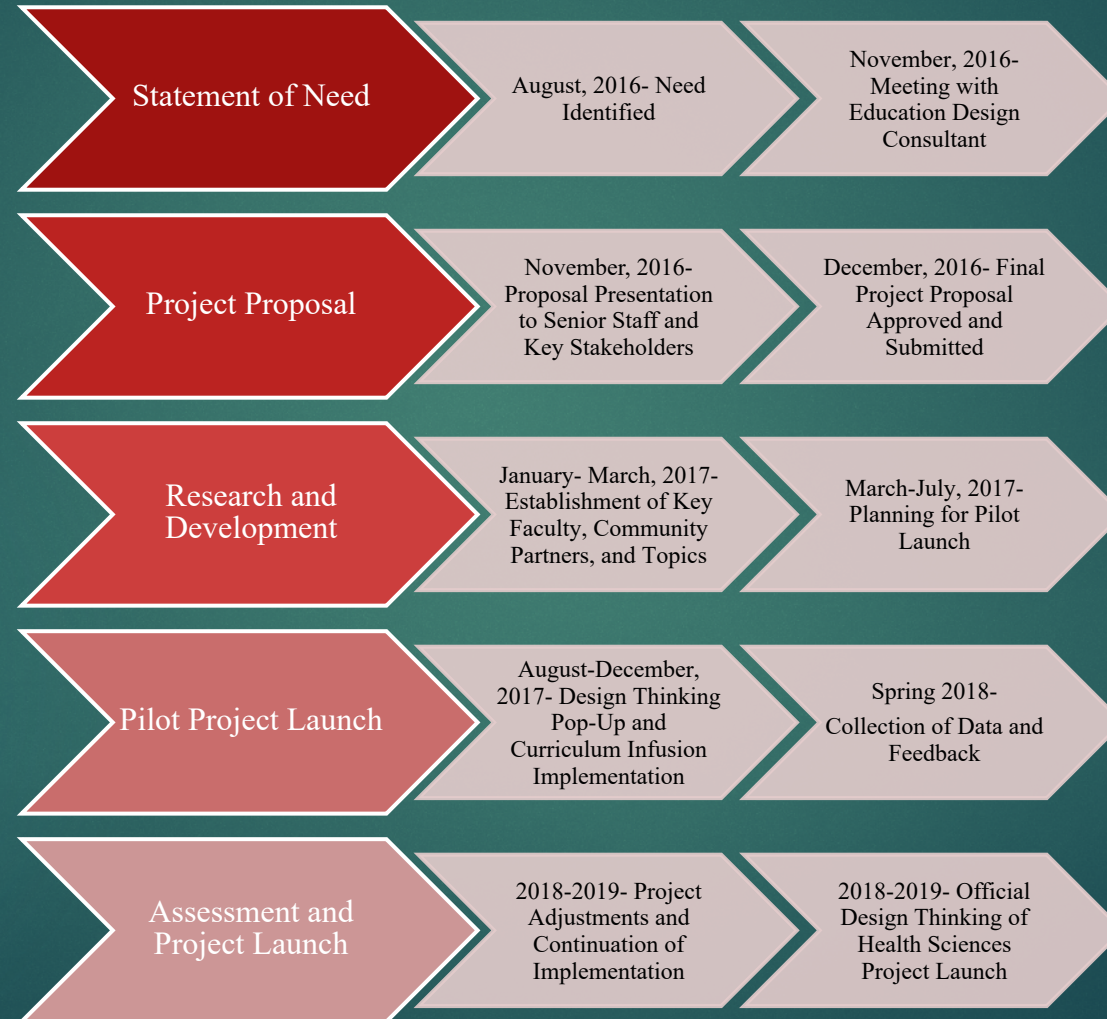
- Implement a multi-year project that focuses on applying design thinking pedagogy across the health sciences in the undergraduate and graduate educational experiences
- Partner with local community organizations through pop-ups to provide “real-life” exposure on how design thinking can be implemented
- Exposing students and community partners to design thinking pedagogy aids in:
 - Creating multi-functional, high impact medical teams
 - Strengthening the leadership abilities of team members
 - Increasing interprofessional educational experiences to make a sustainable impact on the local medical community

Project Scope

- ▶ Design Thinking Pop-Ups
- ▶ Curriculum Infusion
- ▶ Undergraduate and Graduate Students
- ▶ Faculty and Staff
- ▶ Community Partners



Project Approach



Work Plan



Doctoral Student

Develop and Implement Multi-Year Project to Expose Health Science Students to Design Thinking



Community Partners

Key Stakeholders
Present Organizational Challenges
Implement Ideas



Graduate Health Science Students

Physician Assistant and Physical Therapy Students
Participate in Pop-Ups, Curriculum Infusion, and Data Collection



Undergraduate Health Science Students

Pre-Health Scholars
Participate in Pop-Ups, Curriculum Infusion, and Data Collection



Health Science Faculty and Staff

Facilitate and Implement Design Thinking Pedagogy



Director of Design Thinking

Assist in Project Planning and Budget Constraints



Elon University Provost Office

Support Project Goals

Risks and Constraints

► Constraints

- The project will last three years
- Schedule differences

Table 2: Risk Assessment Matrix

RISK ASSESSMENT MATRIX



RISK RATING KEY	LOW	MEDIUM	HIGH	EXTREME
	0 ACCEPTABLE	1 ALARP (as low as reasonably practicable)	2 GENERALLY UNACCEPTABLE	3 INTOLERABLE
	OK TO PROCEED	TAKE MITIGATION EFFORTS	SEEK SUPPORT	PLACE EVENT ON HOLD

		SEVERITY			
		ACCEPTABLE LITTLE TO NO EFFECT ON EVENT	TOLERABLE EFFECTS ARE FELT, BUT NOT CRITICAL TO OUTCOME	UNDESIRABLE SERIOUS IMPACT TO THE COURSE OF ACTION AND OUTCOME	INTOLERABLE COULD RESULT IN DISASTER
LIKELIHOOD	IMPROBABLE RISK IS UNLIKELY TO OCCUR	LOW Participant Success Moving too Quickly	MEDIUM Ineffective Data	MEDIUM Alienating Faculty	HIGH Decrease or Elimination of Funding
	POSSIBLE RISK WILL LIKELY OCCUR	LOW Community Partners	MEDIUM Delay in Timelines Undervalued Pedagogy	HIGH N/A	EXTREME N/A
	PROBABLE RISK WILL OCCUR	MEDIUM Logistics of PA/PT Course Schedule	HIGH Lack of Interest	HIGH N/A	EXTREME N/A

Quality Assurance Plan

Goal

Creating Multi-Functional High-Impact Medical Teams

Strengthen Leadership Abilities of Team Members

Increase Interprofessional Experiences to Make a Sustainable Impact on the Local Medical Community

Plan

To work with faculty in the health sciences to determine what topics would aid in development of high impact teams

Introduce design thinking pedagogy into health science programs at Elon to aid in the development of leadership skills of students

Work with community partners and other health science professions to create interprofessional experiences

Implementation

Hold pop-ups and infuse design thinking pedagogy into health science curriculums

Hold pop-ups and infuse design thinking pedagogy into health science curriculums

Hold pop-ups with community partners and health science students and professions to tackle real life and organizational problems

Evaluation

INCODE v.5 Survey and Focus Group Evaluations

INCODE v.5 Survey and Focus Group Evaluations

INCODE v.5 survey to students and feedback survey from community partners

Feedback/Report

2 Faculty Pop-Ups, 3 Student and Community Partner Pop-Ups, and curriculum infusion into the PT, PA and undergraduate health science programs has been accomplished

Survey results and qualitative data show that students feel that their leadership and communication skills are increased through design thinking experiences

Community partner feedback was positive and student survey results show an increase in wanting to take action in creating social community change

Results

University

- Undergraduate and graduate students in the health sciences exposed to Design Thinking
- Project work was presented at national conference
- Physician Assistant, Physical Therapy, Pre-Health Scholars, Leadership Faculty Scholars
- Community partnerships strengthened and new relationships formed

Student

- Course syllabi and learning objectives in Physician Assistant and Physical Therapy programs reflect design thinking pedagogy
- Undergraduate Pre-Health Scholars program
- Faculty and Staff participation
- 5 Design Thinking Pop-Ups, 3 with community partners

Research Results

Design Thinking Focus Group Themes

Problem Solving	Decision Making	Teams	Leadership	Feelings	Value in Health Sciences
<ul style="list-style-type: none"> • Whole perspective • Evaluate • Creativity • Define the problem • Exploring why • Reflect • More than one solution • Think through 	<ul style="list-style-type: none"> • Tools • Realistic • Implementation • Causative relationship • Synthesize • Obstacles • Opportunity 	<ul style="list-style-type: none"> • Better team member • Valuable asset • Unite • Diverse • Variety of groups • Respect • Consider team 	<ul style="list-style-type: none"> • Evolved • More confident • Manage tasks • Lead situations • Effective communication • Inquire • Effective leader 	<ul style="list-style-type: none"> • Chaotic • Freedom • Appreciate ideas • Creative • Value • Empowering • Respect • No judgment 	<ul style="list-style-type: none"> • Patient experiences • Conflict resolution • Patient centered approach • Ethical dilemmas • IPE

INCODE-ICB-v5 Survey Results in the Graduate and Undergraduate Health Sciences



Reflection

- ▶ Strengthening of relationships with colleagues across the university
- ▶ Learning and embracing new pedagogy
- ▶ Value of team members
- ▶ Utilizing influence and strengths
- ▶ Seek and tailor opportunities for faculty, staff and students that made Design Thinking relevant and relatable to their disciplines



Areas for Future Study

- ▶ Survey employers
- ▶ Impact on medical community
- ▶ Level of growth throughout programs
- ▶ Continued infusion of Design Thinking in the health sciences

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Questions

"Design thinking assigns value to creativity and unconventional methods. Allowing someone the space to step outside of the constructs of the "cannots" to explore the "what ifs" can open up a world of innovation. This liberation in thought without fear of criticism or ridicule can be an unfamiliar and uncomfortable place to be but can reinvigorate our inner creativity that we have been suppressing because traditional models told us there was no place for it. A workforce that encourages freedom of thought and reaffirmation of constructive brainstorming that seeks to constantly pursue improvement is an exciting and challenging place to be." PA 19'

"An effective leader is able to find the value in the diversity of thoughts, reassure each individual that his or her ideas are being considered, and then unite everyone to agree on a single platform. Design thinking definitely refined my ability to synthesize and unite a group of people around a common goal while validating their individuality in the process." PA 19'