

# DESIGN THINKING FOR BSN HONORS STUDENTS: BUILDING COLLABORATIVE SKILLS FOR INNOVATIVE PROBLEM-SOLVING

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# DISCLAIMER

Presenters state no actual or perceived conflict of interest

# CHALLENGES

- Nurses must address clinical challenges in collaborative and innovative ways
- Transitioning from individual mastery of clinical skills to interacting with multi-disciplinary teams can be challenging, especially for new nurses
- Students need to practice skills for effective communication and creative problem solving

# FOCUS QUESTION

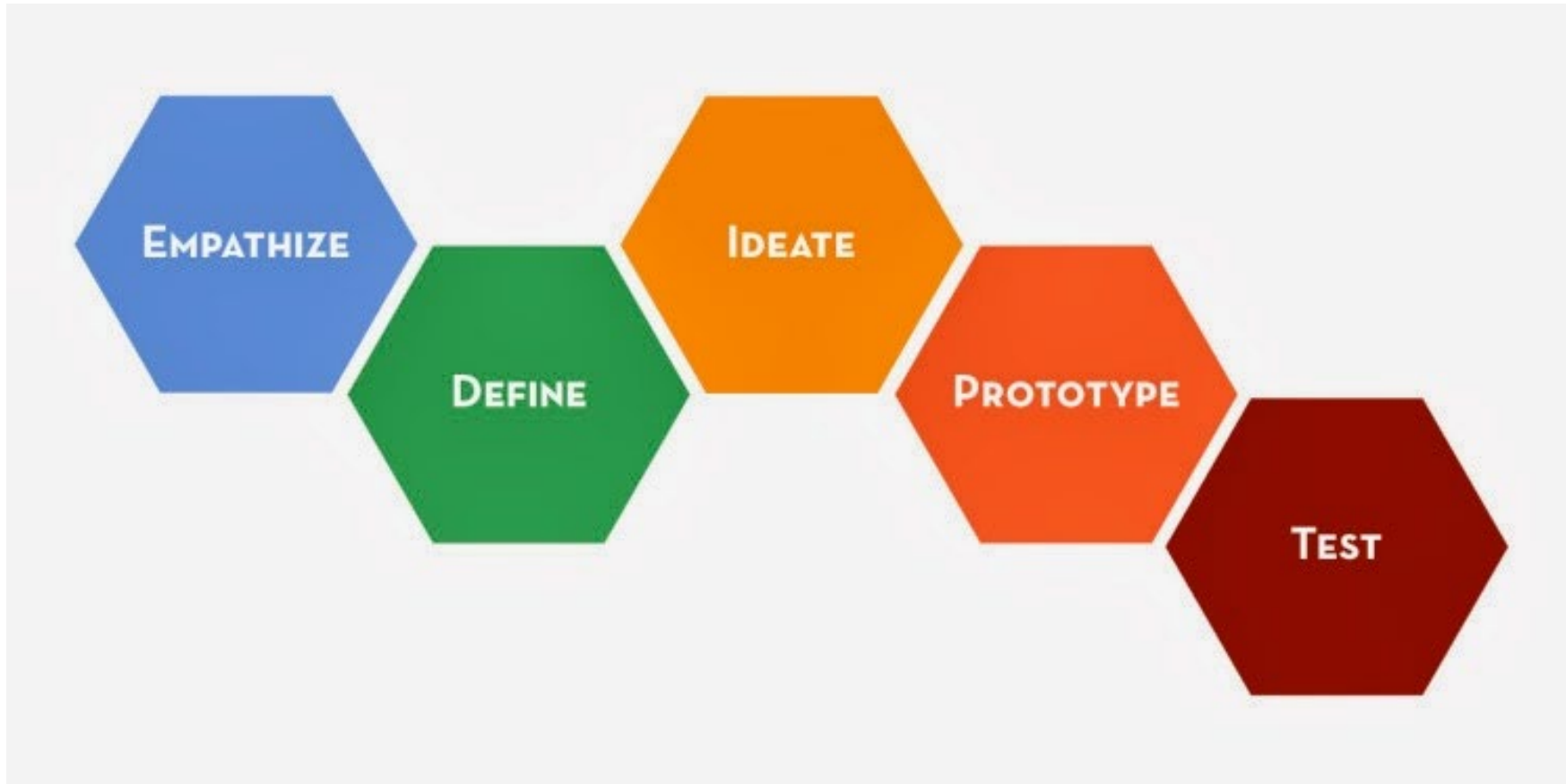
How can we help nursing students improve their skills for effective communication and creative problem solving when working with multi-disciplinary teams?

# INTERVENTION

- Human-centered design thinking (DT) process in undergraduate Honors course
- Goal: Teach students to work together in teams using the five-step process of DT
- Evaluate attitudes toward this method of collaboration for problem solving



# DESIGN THINKING



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# LEARNING ACTIVITIES IN TEAMS

- Craft interview questions
- Practice empathy interviews
- Draft problem definition statements
- Ideate
- Prototype solutions
- Gather feedback
- Present ideas for solutions as a team



# METHODS



# SAMPLE

- Data collected in Summer 2019
- Twenty-three BSN students
- Third semester of nursing school
- First semester of Honors program



# QUALITATIVE APPROACH



- How do students learn through interaction with others using the design thinking process?
- Open-ended surveys (pre-test, post-test)

# PRE-TEST QUESTIONS FOCUSED ON...

- How do students define innovation?
- How do students generate new ideas?
- How do students approach problem solving?
- How do students view teamwork?

# POST-TEST QUESTIONS FOCUSED ON...

- How will students approach problem solving in the future?
- What changes, if any, have students made in the ideation process?
- What are students' attitudes about teamwork after DT intervention?





# DATA ANALYSIS

- Responses uploaded into Nvivo Pro 11
- Two researchers independently performed descriptive and pattern coding to determine themes
- Entire research team met to gain consensus

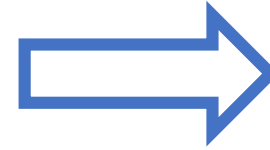
Name	Sources	References
Dislike about Working in Teams Post	1	17
bad dynamics, conflict	1	3
NA - assuming they liked everything	1	4
prefer working alone	1	4
time management	1	6
uneven workload, level of interest	0	0
Dislike about Working in Teams Pre	1	23
bad dynamics, conflict	1	11
not done my way	1	1
time takes longer	1	1
uneven workload, level of interest	1	10
Expectations Met Post	1	17
no	1	4
complaint about teachers	1	1
not focused enough on nursing	1	1
not research	1	1
not what expected but positive	1	2
yes	1	11
helpful tools	1	1
learned a lot	1	1
thought provoking	1	1
Expectations Pre	0	0
NOTE comments seemed same as why they enrolled	0	0
First Faced with Problem Post	1	20
analyze, think	1	2
empathize, problem definition, observation	1	10
consider other POVs	1	5
find out why it is a problem	1	2
nothing different	1	1
rapid ideation	1	2
not fear failure	1	1
step back	1	5
look at big picture	1	1
First Faced with Problem Pre	1	20

# RESULTS

- 23 students
- Response rates:
  - 91% pre-test
  - 87% post-test

## THEMES

Noun to  
Verb



Individual  
Investigation  
to  
Collaboration



Fear of  
Failure to  
Confidence



# THEME #1: WHAT IS INNOVATION?

**NOUN → VERB (PRE-)**

“New techniques  
to conquer old  
problems.”

“A new  
perspective or  
approach to a  
problem.”

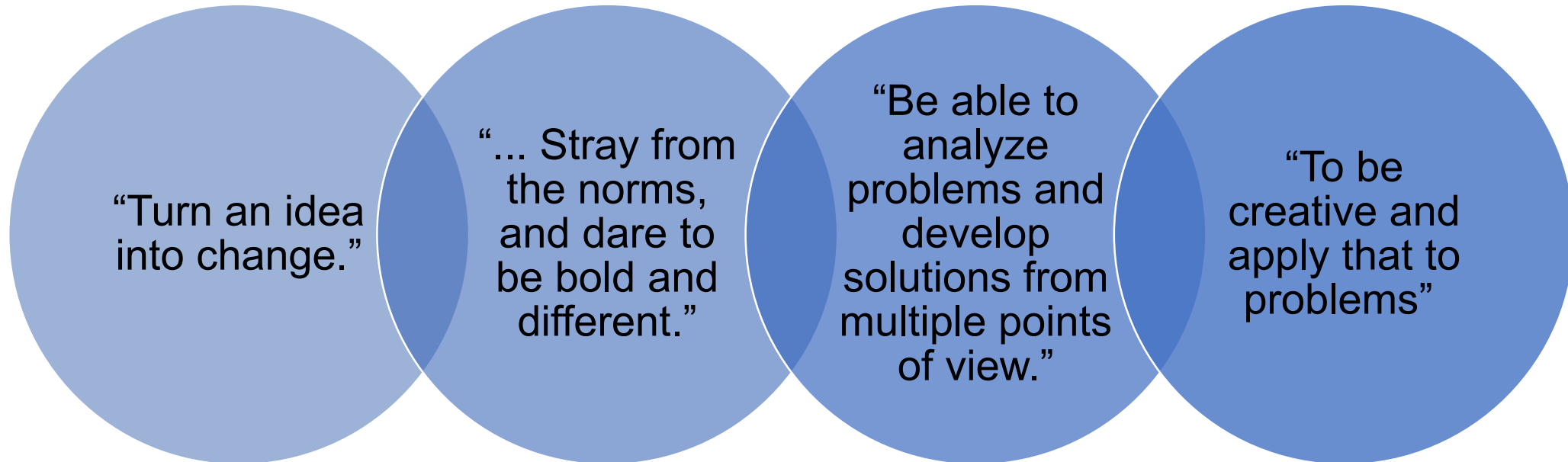
“A visionary.”

“Entrepreneurship.”



# THEME #1: WHAT IS INNOVATION?

NOUN → VERB (POST-)



# THEME #2: INDIVIDUAL INVESTIGATION → COLLABORATION (PRE-)

“I have to make a plan and research about the problem.”

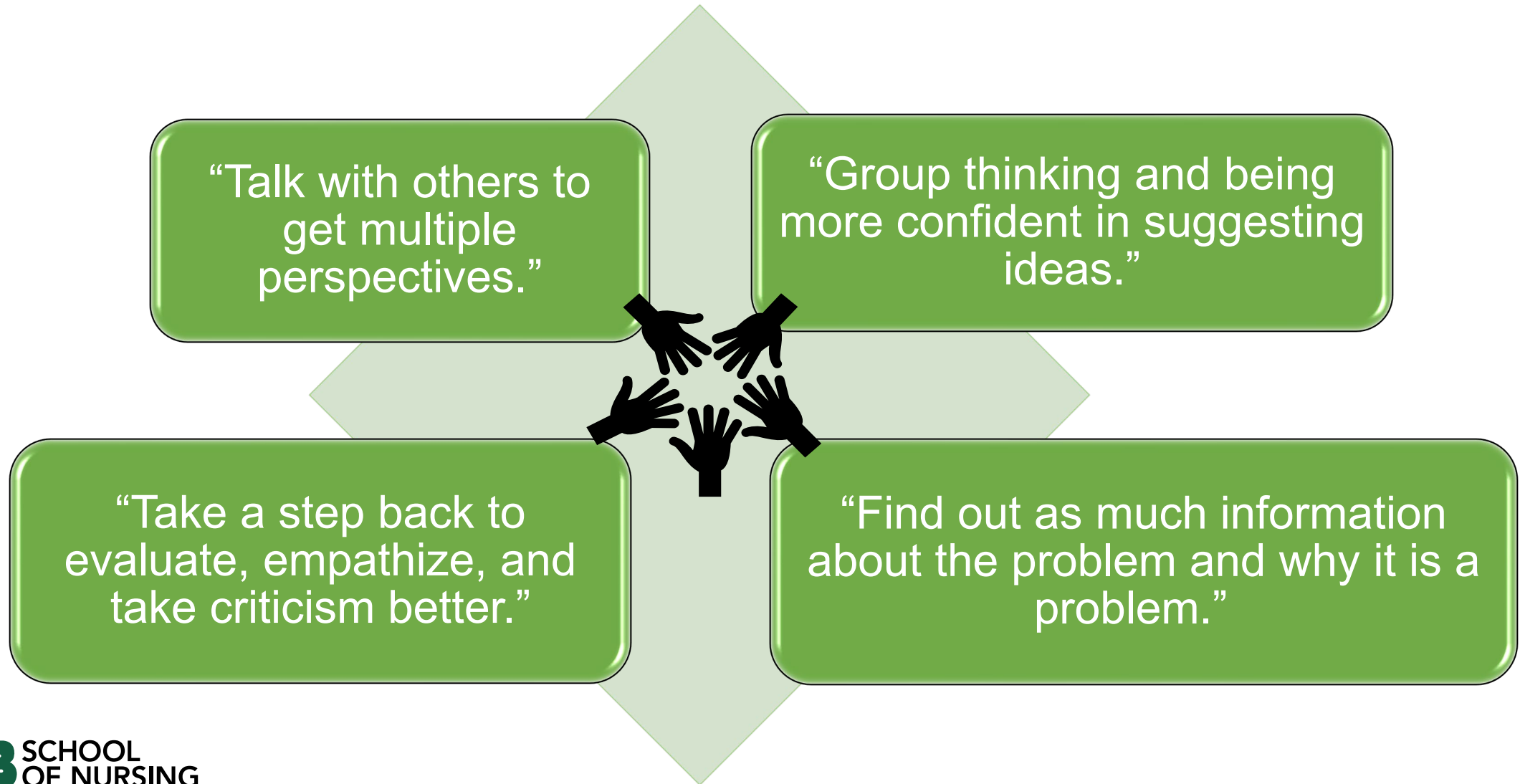
“I think of solutions to the problem/options.”

“First, find a temporary fix until I can further evaluate.”

“Attempt to map out in **my** mind the most direct route to a solution.”

“**I keep it to myself** and work really hard.”

# THEME #2: INDIVIDUAL INVESTIGATION → COLLABORATION (POST-)



# THEME #3: FEAR OF FAILURE → CONFIDENCE (PRE-)

“Look for the simplest solutions and proceed from there.”

“I think before taking action and do research as needed.”

“Think about ways a solution wouldn’t work.”

“[After the first attempt], I usually walk away from the problem and approach it another time.”

# THEME #3: FEAR OF FAILURE → CONFIDENCE (POST-)

“Take failure in stride and not be so critical.”



“Take it step by step without fearing failure.”

“Group thinking and being more confident in suggesting ideas.”

“I will rapid fire [ideas], not worried one will fail.”

# OTHER NOTABLE FINDINGS

- No differences in attitudes for working in teams
- Benefits of other perspectives
- Challenges associated with working in teams
  - Conflict
  - Distribution of work
  - Coordination of activities

# LESSONS LEARNED

- First time use of design thinking with BSN students
- Limited exposure to clinical practice
- Pilot study – will add more qualitative methods (focus groups, observation, journals) or mixed methods in future studies

# CONCLUSIONS

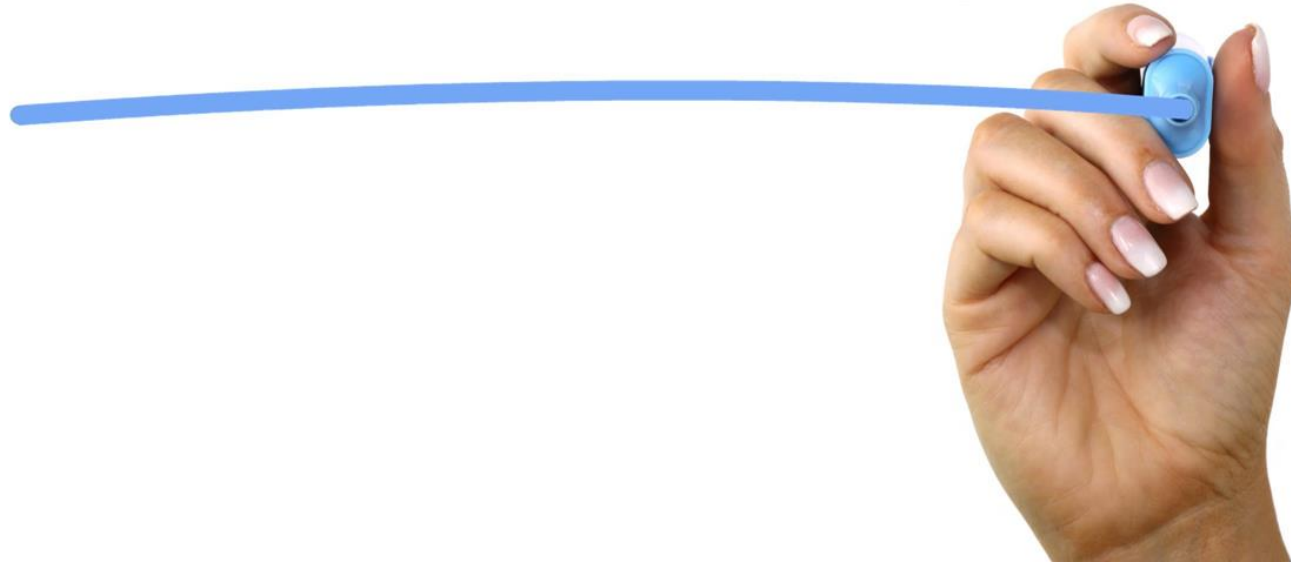
- DT helped BSN students view innovation as a process
- Students gained confidence in interdisciplinary collaboration skills
- Decreased fear of failures in problem solving
- Impact of DT exposure on professional practice is unknown



# ACKNOWLEDGMENTS

- The researchers are grateful for the participation and contributions of our UAB School of Nursing BSN Honors students!

# QUESTIONS



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