Team Simulation Project: Check-in 1 Worksheet

Research Question and Simulation Design

This worksheet will help you formulate your research question and design your team simulation for the first check-in assignment. Use the available simulation modules to explore team dynamics, leadership, and organizational behavior concepts.

## PART 1: RESEARCH QUESTION DEVELOPMENT

### A. Topic Selection (circle one or write your own):

* Leadership styles and effectiveness
* Team diversity and performance
* Psychological safety
* Role of deviant members
* Conflict management
* Decision-making processes
* Communication patterns
* Cultural differences
* Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

### B. Narrowing Your Focus:

What specific aspect of your selected topic interests you most?

### C. Formulating Your Research Question:

Write a clear, specific research question that can be answered through simulation. Use the format “How does X affect Y in team contexts?”

**Examples:**

* How does leadership style (authoritarian vs. democratic) affect team creativity during problem-solving tasks?
* How does the inclusion of a deviant member affect the quality of team decisions?
* How do high vs. low inclusion practices impact participation rates in diverse teams?

## PART 2: SIMULATION DESIGN

### A. Task Design:

What specific task or activity will your simulated team perform? Describe the task, its complexity, and what success looks like.

**Suggested Task Types (check one or modify):**

☐ Creative problem-solving (e.g., design challenge, innovation task)  
☐ Decision-making (e.g., resource allocation, strategic choice)  
☐ Crisis management (e.g., responding to emergency, handling setback)  
☐ Planning (e.g., creating implementation strategy, scheduling)  
☐ Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Task Parameters:**

* Duration/complexity: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Resource constraints: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Success criteria: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

### B. Team Composition:

1. **Team Size:** How many agents will be in your simulation? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. **Team Roles:** What roles will your agents have?
3. **Agent Characteristics:** What specific attributes will you give your agents?

| Agent Name | Role | Personality Traits | Background/Expertise | Other Variables |
| --- | --- | --- | --- | --- |
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1. **Experimental Variables:** What will you manipulate in your simulation?

**Example Variables:**

* Leadership style (authoritarian, democratic, laissez-faire, transformational)
* Team diversity (high/low cognitive diversity, high/low demographic diversity)
* Inclusion practices (high/low inclusion)
* Presence of deviant member (yes/no)
* Communication structure (centralized/decentralized)

### C. Outcome Metrics:

What specific outcomes or metrics will you measure to answer your research question?

**Process Metrics (check all that apply):**

☐ Communication patterns (e.g., who speaks to whom, frequency)  
☐ Participation rates (e.g., contribution distribution)  
☐ Conflict instances (e.g., disagreements, resolutions)  
☐ Decision-making process (e.g., time to consensus, deliberation quality)  
☐ Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Performance Metrics (check all that apply):**

☐ Task completion time  
☐ Solution quality (evaluated against criteria)  
☐ Innovation/creativity (uniqueness of solutions)  
☐ Decision quality (against objective standard)  
☐ Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Team Experience Metrics (check all that apply):**

☐ Member satisfaction  
☐ Psychological safety  
☐ Trust  
☐ Group cohesion  
☐ Other: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## PART 3: CONNECTION TO COURSE CONCEPTS

### A. Theoretical Framework:

Which course concepts or theories does your research question connect to?

### B. Learning Goals:

What do you hope to learn from this simulation that will deepen your understanding of team leadership?

## PART 4: TECHNICAL IMPLEMENTATION PLAN

### A. Simulation Module:

Which existing simulation module will you use or modify?

☐ Leadership Style Simulation (leadership\_style\_simulation.py)  
☐ Diversity and Inclusion Simulation (diversity\_inclusion\_simulation.py)  
☐ Basic Template (simulation\_template.py)  
☐ Creating a custom simulation

### B. Required Modifications:

What specific modifications or extensions will you make to the existing code?

## SUBMISSION CHECKLIST:

☐ Research question is clear, specific, and answerable through simulation  
☐ Task design is well-defined with clear parameters  
☐ Team composition variables are specified in detail  
☐ Outcome metrics are clearly defined and measurable  
☐ Connection to course concepts is explicitly stated  
☐ Implementation plan is feasible given available tools and time

**Submit this worksheet along with a one-page double-spaced summary document answering the five main questions from the assignment prompt.**

**Team Members:**  
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