

# 33RD IPMA WORLD CONGRESS

HOPE - People, Purpose, and  
Performance

IT & AI

Towards a project management  
mentoring framework to facilitate  
service-based learning in community-  
based projects

27 - 29 NOVEMBER 2024

Authors:

- Mr. Tony Kandolo
- Dr. Taryn Bond-Barnard



UNIVERSITEIT VAN PRETORIA  
UNIVERSITY OF PRETORIA  
YUNIBESITHI YA PRETORIA

Graduate School of  
Technology Management

# Content

1. Introduction & Research Background
2. Research Questions
3. Literature Review
4. Conceptual Framework
5. Research Propositions
6. Research Design and Methodology
7. Data analysis
8. Results
9. Discussion
10. Conclusions
11. Recommendation for further studies
12. Questions

# Introduction & Research Background

- ❖ Effective Project Management Principle
- ❖ Project management education approach
- ❖ Service-based learning is an effective way of learning.
- ❖ Mentoring is used as an effective tool for project management learning.
- ❖ Graduate School of Technology Management (GSTM) and PMI SA Chapter initiated the Student Mentorship Programme (SMP) in 2018.
  - Face-to-Face Mentoring 2018 – 2019
  - Virtual Mentoring 2020 – 2024 (2020 – 2022, COVID 19)
- ❖ Objective of the study is to develop a framework for mentoring students, whether be it virtually or face-to-face, who partake in community-based projects at scale.

# Research Questions (RQ)

1. What project conditions are best suited to apply Virtual or Face-to-Face Mentoring when conducting higher education project management mentorship programmes?
2. How do the requirements differ between Virtual Mentoring and Face-to-Face Mentoring when undertaking community-based projects in higher education settings?
  - Mentoring best practices
  - Mentor attributes and responsibilities
  - Mentee attributes and responsibilities

# Literature Review

## Project Management Education & Mentoring

Authors	Research Objective
Berggren and Söderlund (2008)	Implementation of small-scale educational program comprising of 12 to 22 participants to deliver project management education and training.
Weterman et al. (2011)	Demonstration of how technology-enhanced mentoring can support learning
Nakamura et al. (2011)	Investigating the use of a software agent system to guide students during role-play training
Ganiron (2014)	Explored peer mentoring's impact on academic achievement in a project management course
Ramazani and Jergeas (2015)	Emphasized the importance of mentorship programs in developing essential teamwork and leadership skills
Madima and Bond-Barnard (2022)	Benefits of scaled educational program comprising of 325 participants to facilitate service-based learning.



# Literature Review

## Project Management Education & Mentoring

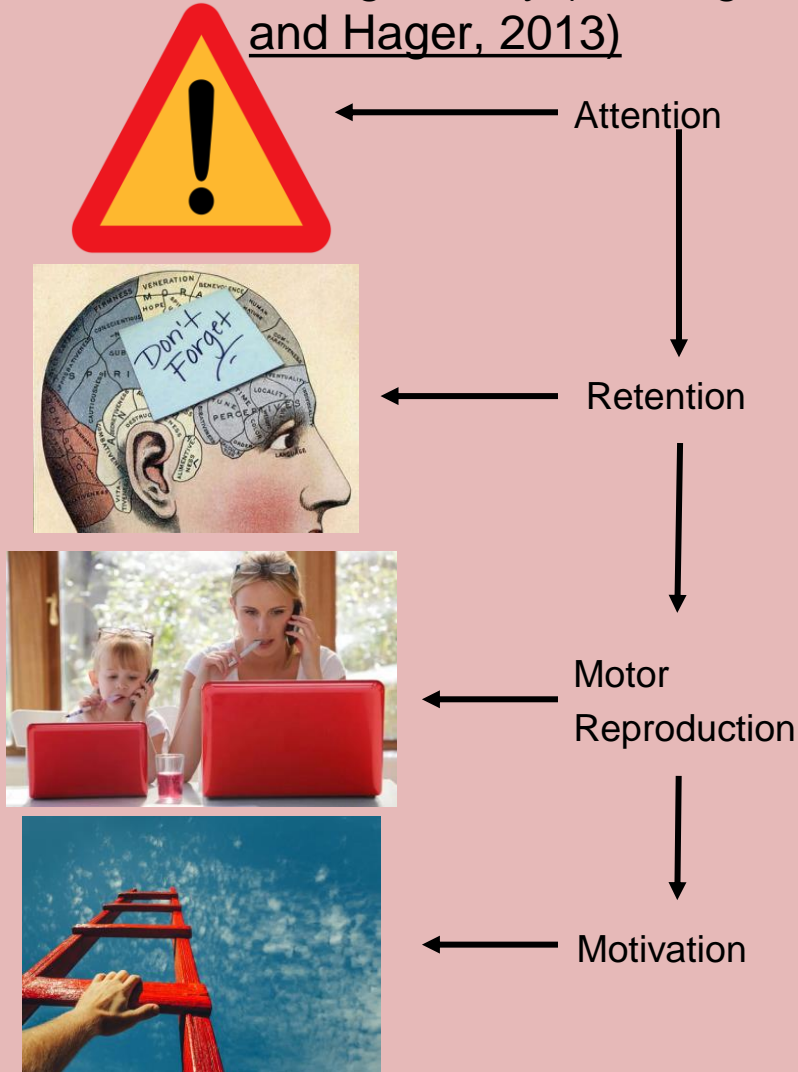
- ❖ Literature gap – Scalable mentoring initiative

## Face-to-Face Mentoring vs Virtual Mentoring

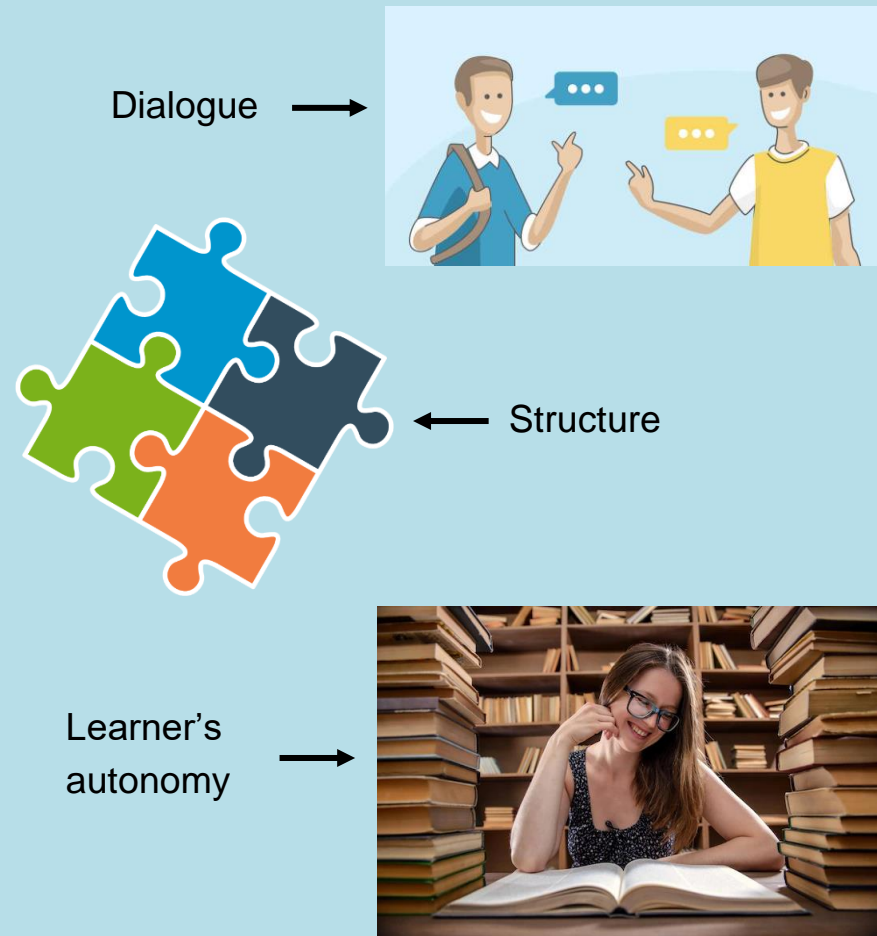
- ❖ Goals and Principles
  - Mutually beneficial relationship
- ❖ Mentoring Applications
  - Geographically dispersed communication
  - Flexibility
  - Remote learning environment

# Conceptual Framework

## Social Learning Theory (Dominguez and Hager, 2013)



## Moore's Theory of Transactional Distance (Moore, as cited in Reyes, 2013)



# Conceptual Framework

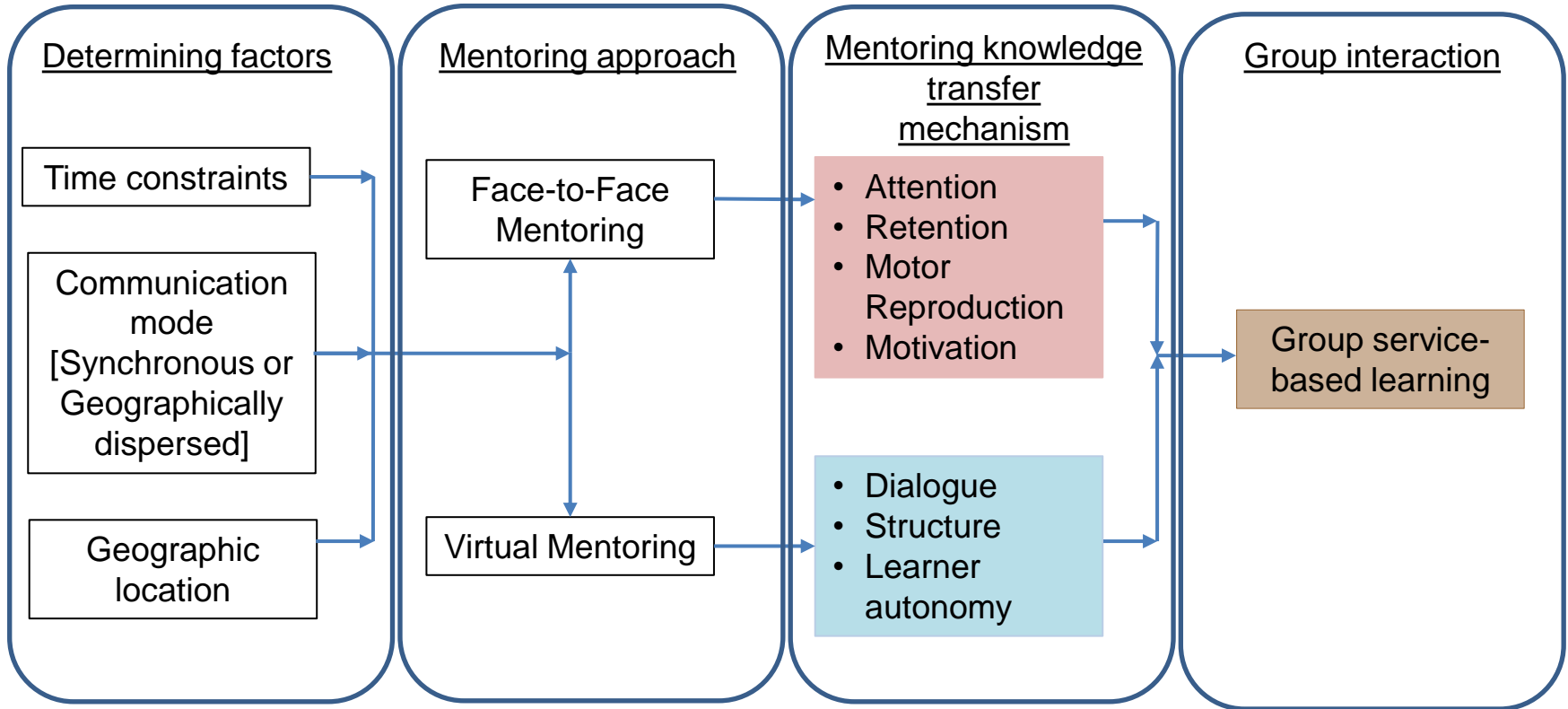
Community of Practice Theory (Wenger, as cited in Farnsworth et al., 2016)





# Conceptual Framework

## Proposed Conceptual Framework



# Research Design and Methodology

- ❖ Exploratory research
  - Mixed Methodology
- ❖ Delphi Technique – Two Rounds
  - Round 1: Structured Questions
    - Closed-end and Open-ended
  - Round 2: 5 point Likert-Scale
    - Strongly Disagree, Disagree, Neutral, Agree, Strongly Agree
- ❖ Sampling
  - Purposive, non-probability, sampling – 18 participants with prior SMP experience
  - Ethics – consent form
- ❖ Response rate
  - Round 1 - 7/18 (39%)
  - Round 2 - 7/7 (100%)

# Data Analysis

## ❖ Round 1 – Qualitative analysis

- Content Analysis
- **Eight themes:** *Virtual mentoring suitable project conditions, Virtual Mentoring best practices, Virtual Mentor attributes and responsibilities, Virtual Mentee attributes and responsibilities, Face-to-face Mentoring suitable project conditions, Face-to-Face Mentoring best practices, Face-to-face Mentor attributes and responsibilities, Face-to face Mentee attributes and responsibilities*
- Initial 205 statements redacted to 122 statements

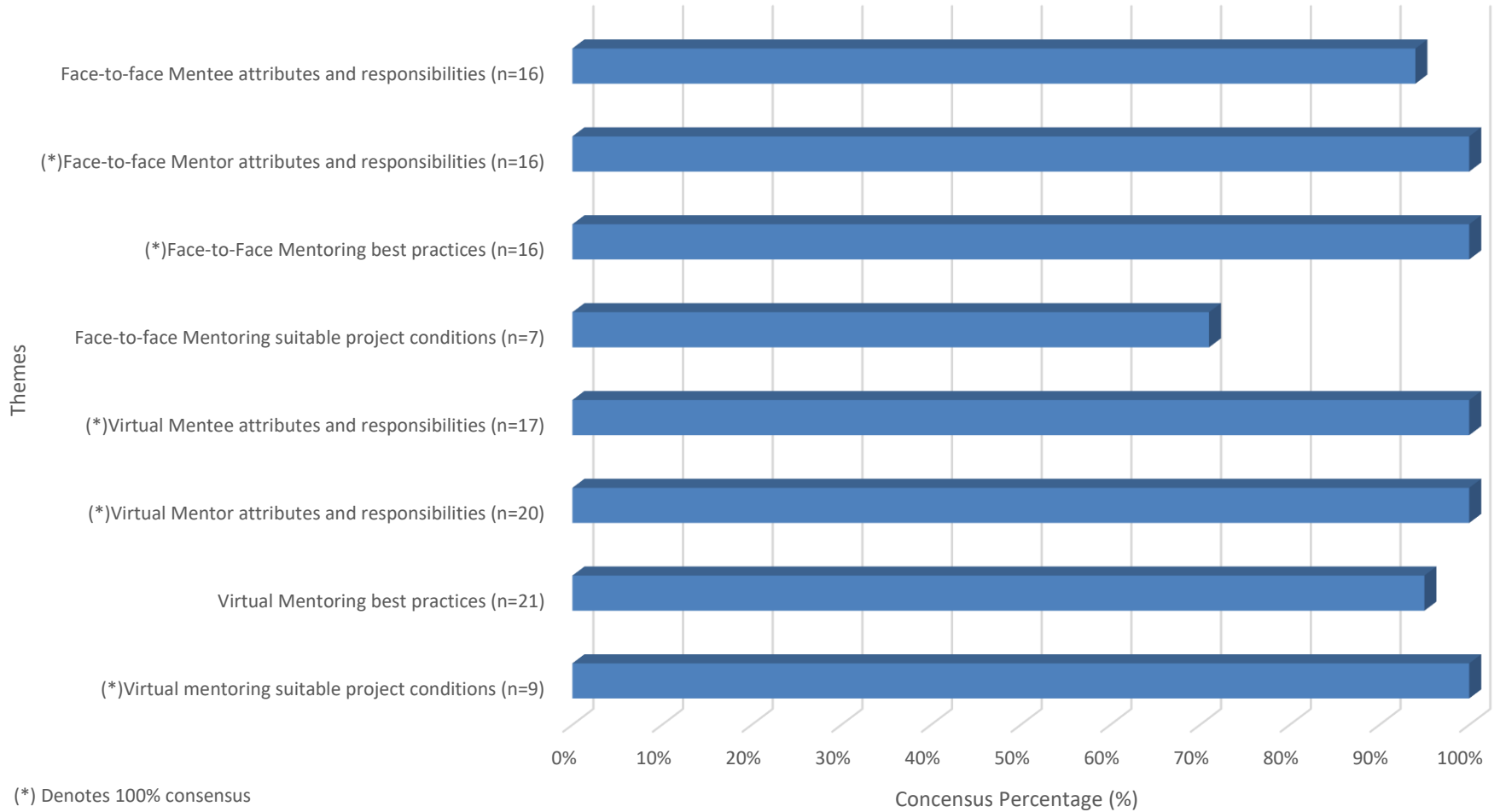
## ❖ Round 2 – Quantitative analysis

- Descriptive Statistics

## ❖ Consensus:

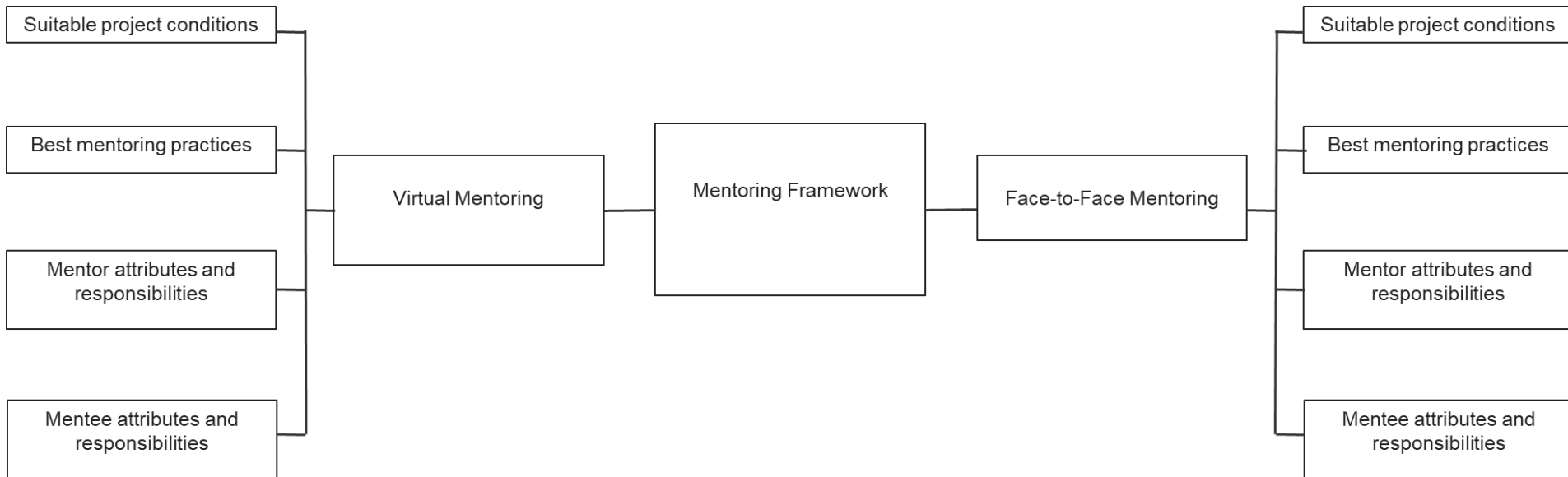
- Agreement = Agree + Strongly Agree
- Agreement > 70%
- Weak consensus: 71-79%; Strong consensus: 80-100%

# Results



97% consensus (n = 122)

# Discussion



# Conclusions

## Research Questions

- ❖ RQ1: Suitable Virtual Mentoring project conditions
  - Dispersed geographical location
  - Pandemics
  - Impromptu meetings
  
- ❖ RQ1: Suitable Face-to-Face Mentoring project conditions
  - Relationship building
  - Emotional support
  - Site visits
  
- ❖ RQ2: Mentoring approach requirements
  - Best mentoring practices – similar
  - Mentor and mentee attributes and responsibilities – similar ≠ technologically proficient

# Conclusions

## Research Significance

- ❖ Existing literature contribution
- ❖ Mentoring strategy selection
- ❖ Mentoring framework foundation

## Research Limitation

- ❖ Sample Size
- ❖ Mentee perception

# Recommendation for Further Study

- ❖ Mentees perceptions
- ❖ Blended mentoring approach



# QUESTIONS?



UNIVERSITEIT VAN PRETORIA  
UNIVERSITY OF PRETORIA  
YUNIBESITHI YA PRETORIA

Graduate School of  
Technology Management

30  
years of  
innovation  
1987 - 2017

Graduate School of Technology Management