Self Determination Theory, COACHE, and Faculty Outcomes in Higher Education

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Overview

• ISU COACHE survey through the lens of Self-Determination Theory (SDT)
  • Overview of SDT
  • Introduction of constructs and outcome measures for structural equation modeling (SEM)
  • Sample characteristics
  • SEM results
  • Results from non-tenure track faculty
Self-Determination Theory

• Meta-theoretical approach to motivation and personality

• 3 basic psychological needs:
  • Competence
  • Relatedness
  • Volitional Autonomy
Institutional Supports (e.g. Dean, Research, Worklife balance)

- Rank
- Gender
- STEM/non-STEM

Global Satisfaction

Autonomy
Relatedness
Competence

Satisfaction with Teaching/Service
Harvard COACHE Survey

- Web-based faculty satisfaction survey (Benson, Mathews, & Trower, 2014)
  - Administered to 250 institutions since 2003
- Approx. 170 five-point Likert items and 25 min mean completion time
  - Variance due to branching based on rank
- Asks about various aspects of participants’ work (e.g., teaching, service, research, climate, satisfaction, etc.)
- Also collects a host of demographic data
Deriving Constructs from COACHE Items

- COACHE themes

- Some of our constructs may be similar, but are independent

- Development of constructs
Perceived Needs according to Self-Determination Theory

- Perceived autonomy
- Perceived competence
  - Measured as competence time spent
- Perceived relatedness
Perceived Needs according to Self-Determination Theory

Relatedness Example Item:

Please rate your level of satisfaction or dissatisfaction with the following statement:

How well you fit in your department (e.g., your sense of belonging in your department)

Very dissatisfied; Dissatisfied; Neither satisfied nor dissatisfied; Satisfied; Very satisfied; Decline to answer; Not applicable
Institutional Supports

- 11 identified from COACHE survey

Example Item for Research Support Construct:
Please rate your level of satisfaction or dissatisfaction with the following:

The availability of course release time to focus on your research.

Very dissatisfied; Dissatisfied; Neither satisfied nor dissatisfied; Satisfied; Very satisfied; Decline to answer; Not applicable
Institutional Supports

• Examples
  • Work-life balance support
  • Research support
  • Dean support
Outcomes

• Teaching/service satisfaction

• Global satisfaction
Our Sample

- 558 Faculty
  - 126 Assistant
  - 175 Associate
  - 275 Full

- Gender
  - 63.1% Male
  - 36.9% Female

- Race/Ethnicity
  - 81.4% White (non-Hispanic)
  - 12.9% Asian, Asian-American, or Pacific Islander
  - 2.7% Hispanic or Latino
  - 2.3% Black or African American
  - 0.2% American Indian or Native Alaskan
  - 0.7% Multiracial
  - 0.4% Other
Perceived Autonomy Model
Perceived Autonomy Model Effect Sizes (Standardized Regression Coefficients)
Predictors of Teaching Service Satisfaction

- Perceived Autonomy
- Research Support
- Evaluation Support
- Perceived Competence Support
- Benefit Support
- Work/Life Balance
- STEM/non-STEM
- Chair Support

Value Standardized Regression Coefficients
Predictors of Global Satisfaction

Value Standardized Regression Coefficients

- Recognition Support
- Perceived Competence Support
- Perceived Autonomy
- Evaluation Support
- Upper Level Administration
- STEM/Non-STEM
- Benefit Support
- Work-Life Balance
- Faculty Teaching Quality
Significant Indirect Effects for Perceived Autonomy Model

- Perceived Autonomy was a statistically significant mediator of Teaching/Service Satisfaction for:
  - Faculty Teaching Quality \((p=.037)\)
  - Dean Support \((p<.001)\)
  - Research Support \((p<.001)\)
  - Evaluation Support \((p=.017)\)
  - Recognition support \((p=.016)\)
  - Work/Life Balance Support \((p<.001)\)
  - Chair Support \((p<.001)\)
  - Perceived Competence Support \((p=.003)\)
Significant Indirect Effects for Perceived Autonomy Model

- Perceived Autonomy was a statistically significant mediator of Global Satisfaction for:
  - Dean Support ($p<.001$)
  - Research Support ($p=.004$)
  - Evaluation Support ($p=.027$)
  - Recognition support ($p=.026$)
  - Work/Life Balance Support ($p=.004$)
  - Chair Support ($p<.001$)
  - Perceived Competence Support ($p<.001$)
Perceived Competence Time Spent Model
Perceived Competence Time Spent Model Effect Sizes (Standardized Regression Coefficients)
Value Standardized Regression Coefficients

Predictors of Teaching Service Satisfaction

- Perceived Competence Time Spent
- Research Support
- Evaluation Support
- Benefit Support
- Gender
- Perceived Competence Support
Predictors of Global Satisfaction
Significant Indirect Effects for Perceived Competence Time Spent Model

- Perceived Competence Time Spent was a statistically significant mediator of Teaching/Service Satisfaction for:
  - STEM/non-STEM \((p<.001)\)
  - Chair Support \((p=.007)\)
  - Work/Life Balance \((p<.001)\)
  - Evaluation Support \((p<.001)\)
  - Perceived Competence Support \((p=.007)\)
Relatedness Model
Relatedness Model Effect Sizes
(Standardized Regression Coefficients)
Predictors of Global Satisfaction
Significant Indirect Effects for Relatedness Model

- Relatedness was a statistically significant mediator of Global Satisfaction for:
  - Faculty Teaching Quality ($p<.001$)
  - Evaluation Support ($p=.006$)
  - Recognition support ($p<.001$)
  - Work/Life Balance Support ($p=.023$)
  - Chair Support ($p<.001$)
  - Benefit Support ($p=.026$)
Supporting Non-Tenure Track Faculty Satisfaction

Matthew Seipel
Deriving Constructs from COACHE

• Started with environmental supports, SDT needs, and outcome constructs operationalized by Larson, Shelley, & Gahn (2015)

• **Predictors**: Departmental, Administrative, Personal and Family supports

• **Mediators**: Volitional Autonomy, Perceived Relatedness

• **Outcomes**: Teaching/Service Satisfaction, Global Satisfaction
Analyses

• Path analysis
• Cutoff criteria provided by Hu & Bentler (1999) for goodness-of-fit
• Bootstrap tests using bias corrected 95% confidence intervals to test the significance of the mean indirect effects
• 2 (Gender: male vs. female) x 2 (Area: STEM vs. non-STEM) ANOVAs with all constructs
  • No significant main effects or interactions
Partially Mediated Model  \( \chi^2(18, N = 96) = 224, p < .001, \text{CFI} = 1.00, \text{RMSEA} < .01, \text{SRMR} < .01 \)
Fully mediated model $\chi^2(6, N = 96) = 2.80, p = .83, CFI = 1.00, \text{RMSEA} < .01, \text{SRMR} = .02$
Discussion

- Preliminary evidence for utility of SDT as a conceptual framework for NTT faculty
- Mediation hypotheses partially supported
  - Perceived relatedness mediated all relations between the environmental supports and faculty well-being
  - Volitional autonomy only (marginally) mediated path from administrative support to global satisfaction.
Implications for Both Studies for BI Community

• Increasing Relatedness by involvement in BI activities

• Increasing Volitional Autonomy

• Institutional Supports as they directly and indirectly affect Faculty Satisfaction