



UTILIZANDO METODOLOGÍA MIXTA EN ESTUDIOS DE  
INVESTIGACIÓN SOBRE EQUIDAD DE GÉNERO EN CARRERAS DE  
SISTEMAS Y TECNOLOGÍA

USING MIXED METHODOLOGIES IN GENDER EQUALITY RESEARCH  
IN INFORMATION TECHNOLOGY

INDIRA GUZMAN, PHD

INWES – MAY, 2022

# Presenter

## Dr. Indira Guzman

*Director of Doctoral Studies, Glenn R. Jones College of Business*

---



### Expertise

- Management Information Systems, E-Learning, Occupational culture of technology professionals, Information Systems Auditing and Control, Research Design.

### Education/Training

- Ph.D. in Information Science and Technology, Syracuse University, New York, USA
- M.Sc. in Information Management, Syracuse University, New York, USA
- B.S., M.S. Information Systems Engineering, Donetsk National Technical University, Ukraine

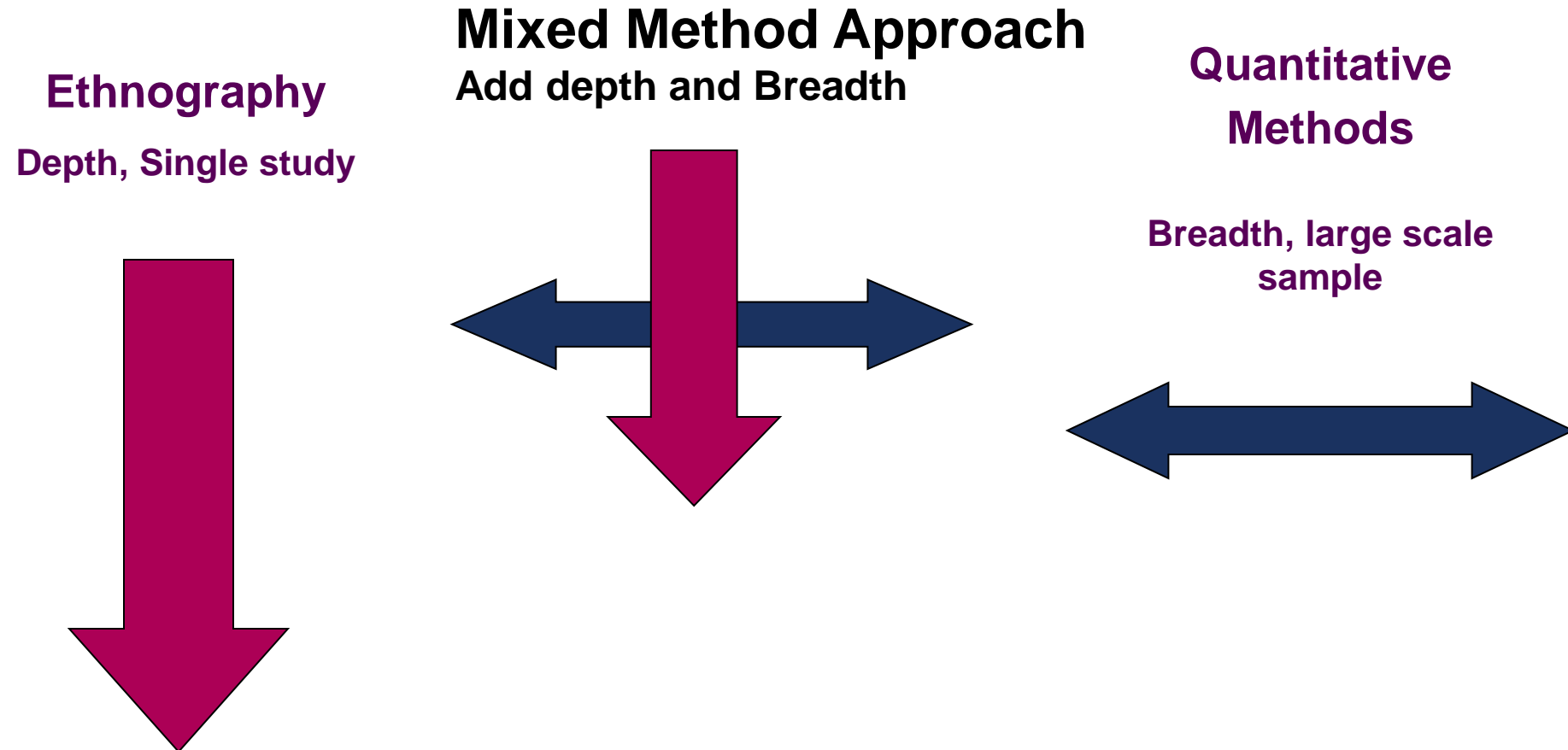
### Accomplishments

- Published 2 books and more than 60 refereed journal articles, conference proceedings, and book chapters. Her work has been cited more than 800 based on Google Scholar.
- Recipient of the prestigious Fulbright Scholarship
- Active member of the Association for Computing Machinery (ACM), Academy of Management (AOM), Association of Information Systems (AIS), ISACA,, and the National Center of Women in IT (NCWIT).
- President of the Latin American and Caribbean Chapter of the Association of Information Systems (LACAIS). Co-authors of the proposal of the ELLAS project funded by IDRC.

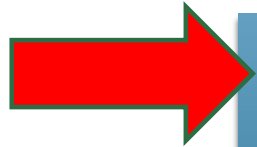
## METODOLOGIA MIXTA DE INVESTIGACION

- De acuerdo a Mingers (2001), el concepto de “metodología” se refiere a un sistema estructurado de pautas o de actividades para asistir la generación de resultados de investigación válidos y confiables. Este sistema consiste a menudo en el uso de ciertas técnicas que deben ser utilizadas al mismo tiempo y con un mismo objetivo (Mingers, 2001).
- Los estudios de metodología mixta sin embargo, se refieren a la combinación de enfoques cualitativos y cuantitativos en la metodología de la investigación en un solo estudio en particular o en un estudio multifacético (Tashakkori y Teddlie, 19988; Creswell, 2014) que además incluyen suposiciones filosóficas (Creswell and Clark, 2007).

# MIXED METHODS



## RESEARCH AREAS OF INTEREST

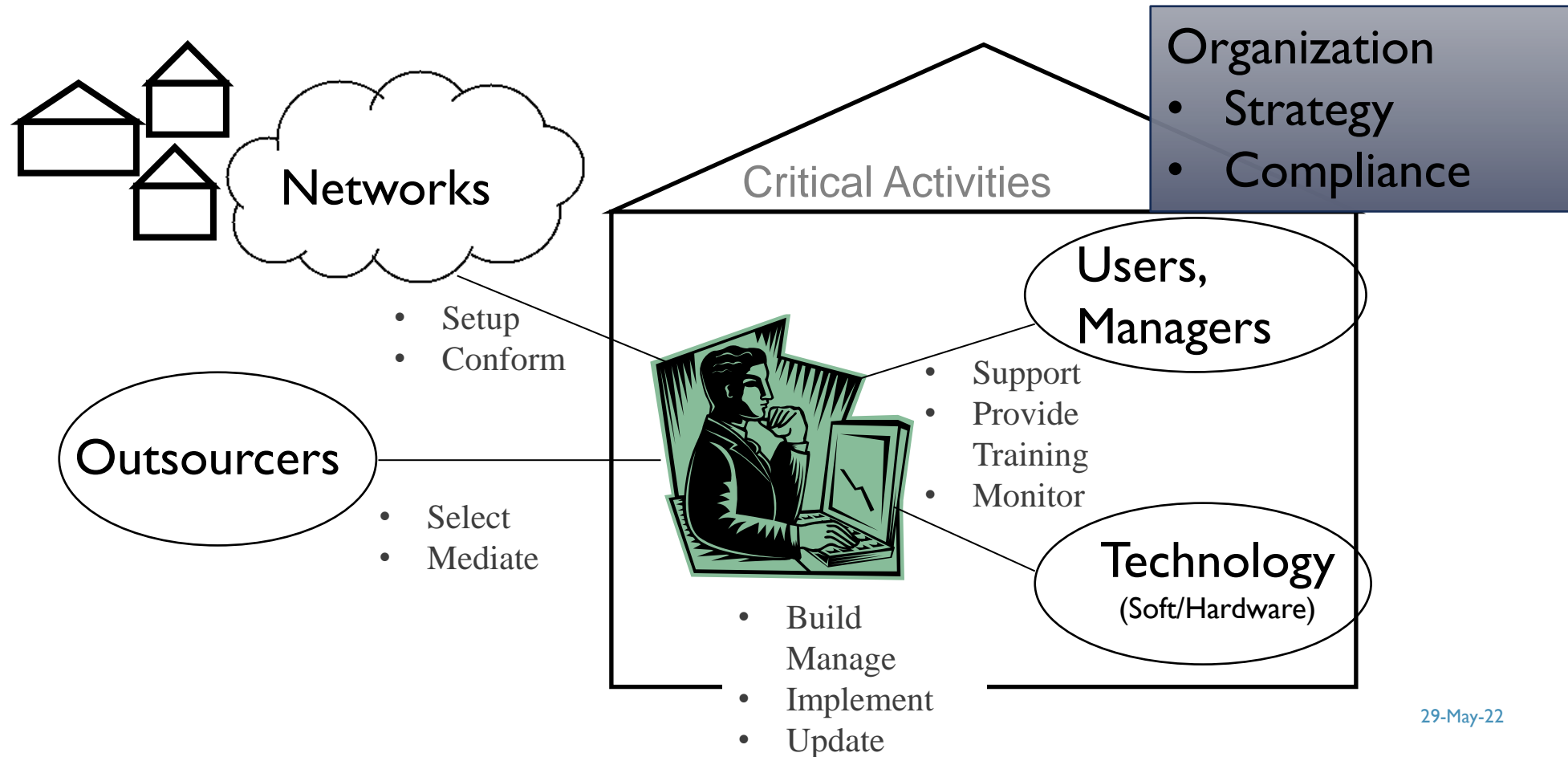


ITWF -> ITOC

Information  
Security Policy  
Compliance

Gender Gap in  
IT Leadership in  
Latin America

# ROLE OF IT PROFESSIONALS IN ORGANIZATIONS



## WHY THE STUDY OF ITWF AND ITOC IS STILL RELEVANT?

- Not clear understanding of what IT professionals do
  - “the workers who design, build, and manage application systems, who introduce them and other related IT into organizational environments, who operate, maintain, extend, and manage the IT, and who provide training, documentation, and support for the organizational context in which these systems are embedded” (Niederman et al., 2016, p. 29).
- Recruitment, motivation, retention, support and advancement of information technology workers is critical for the continued success of organizations
- To meet the high demand for information technology (IT) professionals, organizations must become more effective at attracting and retaining women. Ninety-seven percent in the US had implemented diversity and inclusion interventions. Despite these efforts, the percentage of women working in IT continues to decline, raising questions about the effectiveness of current organizational interventions aimed at increasing gender diversity.

## Top 10 Fastest Growing Occupations, Excluding Pandemic Recovery\*

	Percent change, projected 2020-30	Employment change, projected 2020-30 (in thousands)	Median annual wages, May 2020
Wind turbine service technicians	68.2%	4.7	\$56,230
Nurse practitioners	52.2%	114.9	\$111,680
Solar photovoltaic installers	52.1%	6.1	\$46,470
Statisticians	35.4%	14.9	\$92,270
Physical therapist assistants	35.4%	33.2	\$59,770
Information security analysts	33.3%	47.1	\$103,590
Home health and personal care aides	32.6%	1,129.9	\$27,080
Medical and health services managers	32.5%	139.6	\$104,280
Data scientists and mathematical science occupations, all other	31.4%	19.8	\$98,230
Physician assistants	31.0%	40.1	\$115,390

\*Data excludes occupations that had a decline in wage and salary employment greater than the decline for all occupations from 2019 to 2020 (approximately 6%).

Note: Wage data are from the Occupational Employment and Wage Statistics program, U.S. Bureau of Labor Statistics.



## Projected Percent Change by Selected Occupational Groups, 2020-30

### Percent employment growth, projected 2020-30



■ Part of projected growth attributable to pandemic recovery

# THE IT GENDER GAP CONTINUES

- Based on a 2021 BLS report, women occupy only 26.7% of management positions in IT

## 11. Employed persons by detailed occupation, sex, race, and Hispanic or Latino ethnicity

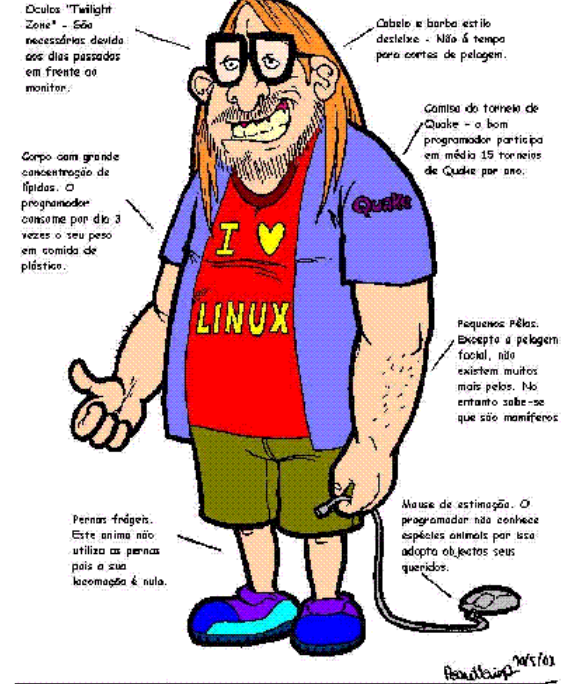
[Numbers in thousands]

Occupation	2021					
	Total employed	Percent of total employed				
		Women	White	Black or African American	Asian	Hispanic or Latino
<b>Total, 16 years and over</b>	152,581	47.0	77.5	12.3	6.6	18.0
<b>Management, professional, and related occupations</b>	64,744	52.0	78.3	9.8	9.0	10.4
<b>Management, business, and financial operations occupations</b>	27,864	45.3	80.8	9.2	7.1	10.8
<b>Management occupations</b>	18,986	40.9	82.2	8.6	6.5	11.1
Chief executives	1,664	29.1	85.7	5.9	6.8	7.4
General and operations managers	1,085	36.4	82.7	9.3	4.6	10.3
Legislators	21	-	-	-	-	-
Advertising and promotions managers	72	42.4	78.7	12.1	5.2	6.2
Marketing managers	576	61.4	83.5	6.2	7.3	8.3
Sales managers	537	30.6	86.4	5.9	5.0	10.6
Public relations and fundraising managers	100	68.0	89.3	3.5	4.4	7.2
Administrative services managers	60	79.0	84.0	13.3	1.5	9.9
Facilities managers	146	21.3	90.5	7.4	0.2	14.5
<b>Computer and information systems managers</b>	715	26.7	72.4	7.2	17.8	7.3
Financial managers	1,307	54.6	78.5	9.0	9.0	10.4
Compensation and benefits managers	16	-	-	-	-	-
Human resources managers	273	80.8	78.9	12.3	6.4	12.5



# ANATOMIA DO PROGRAMADOR

*Informações para os outros*



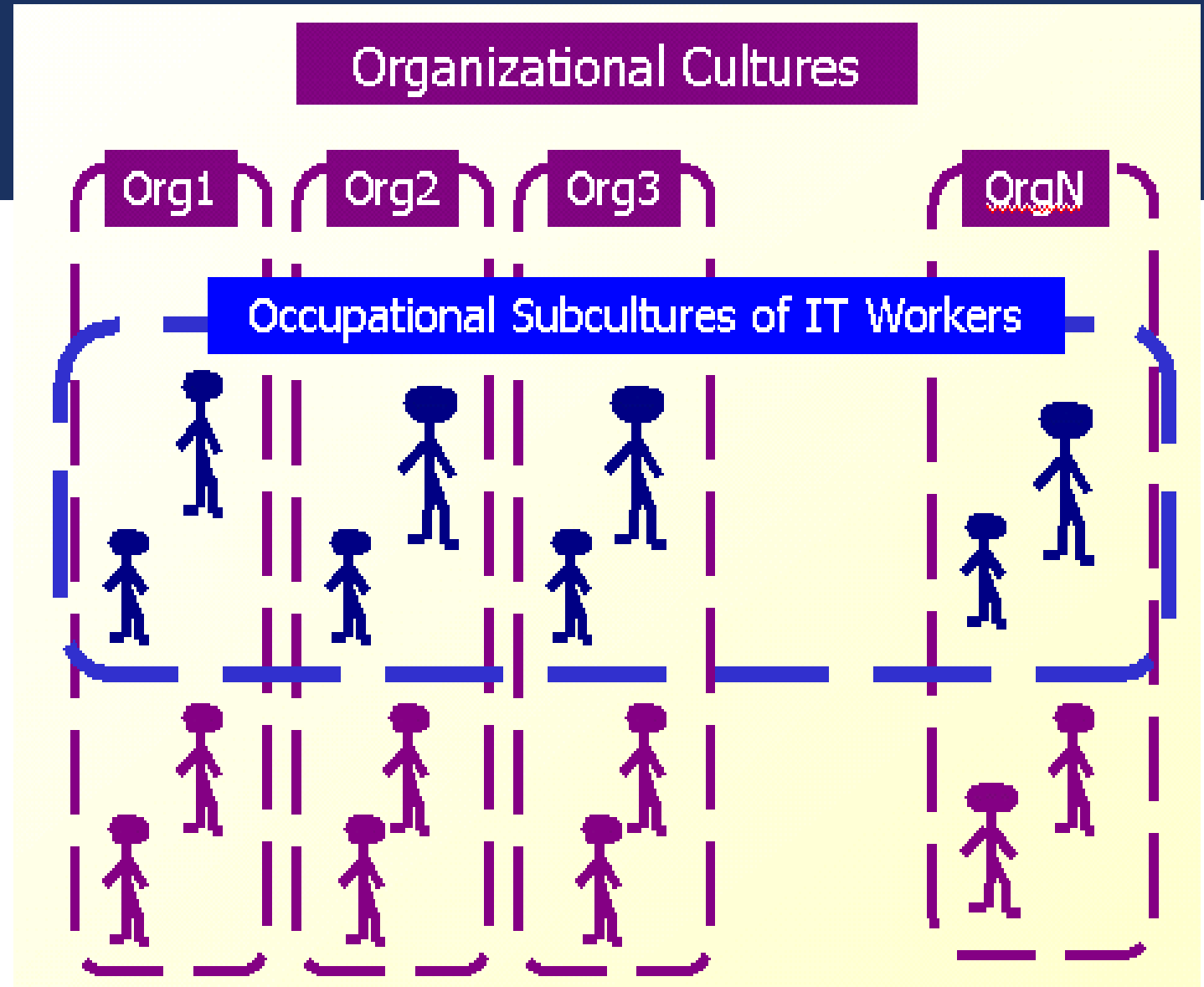
BUT... WHO IS THE IT WORKFORCE?

## OCCUPATIONAL SUBCULTURES (TRICE, 1993)

Culture="the way we do things around here" (Schein, 1990, 1996).

Occupational subcultures arise from the shared educational, personal, and work experiences of individuals who pursue the same profession and share similar ideologies and forms of expressing those ideologies in speech and behavior (Hall, 1959, 1976; Hofstede, 1997; Trice, 1993)

GUZMAN, I.R.



# QUALITATIVE STUDY: FINDINGS OF THE 1<sup>ST</sup> STUDY

- We conducted 121 semi-structured interviews in 8 not-for-profit, small-to-medium sized organizations which included a private university, a suburban hospital, a counseling center, a manufacturing company, and a social service agency. Our data collection consisted of
  - 32 interviews with IS employees: systems administrators, computer consultants, telecommunications coordinators, and system or support analysts (13 Females and 19 Male)
  - 82 interviews with regular employees
  - 7 interviews with upper-level managers.

Interviews lasted 30  
– 50 minutes each.



Data was collected over a period of approximately one and a half years

# RESULTS FROM ITP 1<sup>ST</sup> STUDY

The following quote from a Network Administrator expresses the sense that ISEs feel that they run the system single-handedly:

*“For the last 12 years, I have kept the system going.”*

Extreme and unusual demands pertaining to the profession:

*“There is always so much work... so if I wanted to spend 24 hours a day here, I could”*

These verbatim statements clearly point to the presence of conflict and miscommunication between ISEs and end-users:

*“I have always said that I would have a great job if it wasn't for the users.”*

It is evident that ISEs would appreciate if end-users would take more initiative and attempt to solve minor problems on their own:

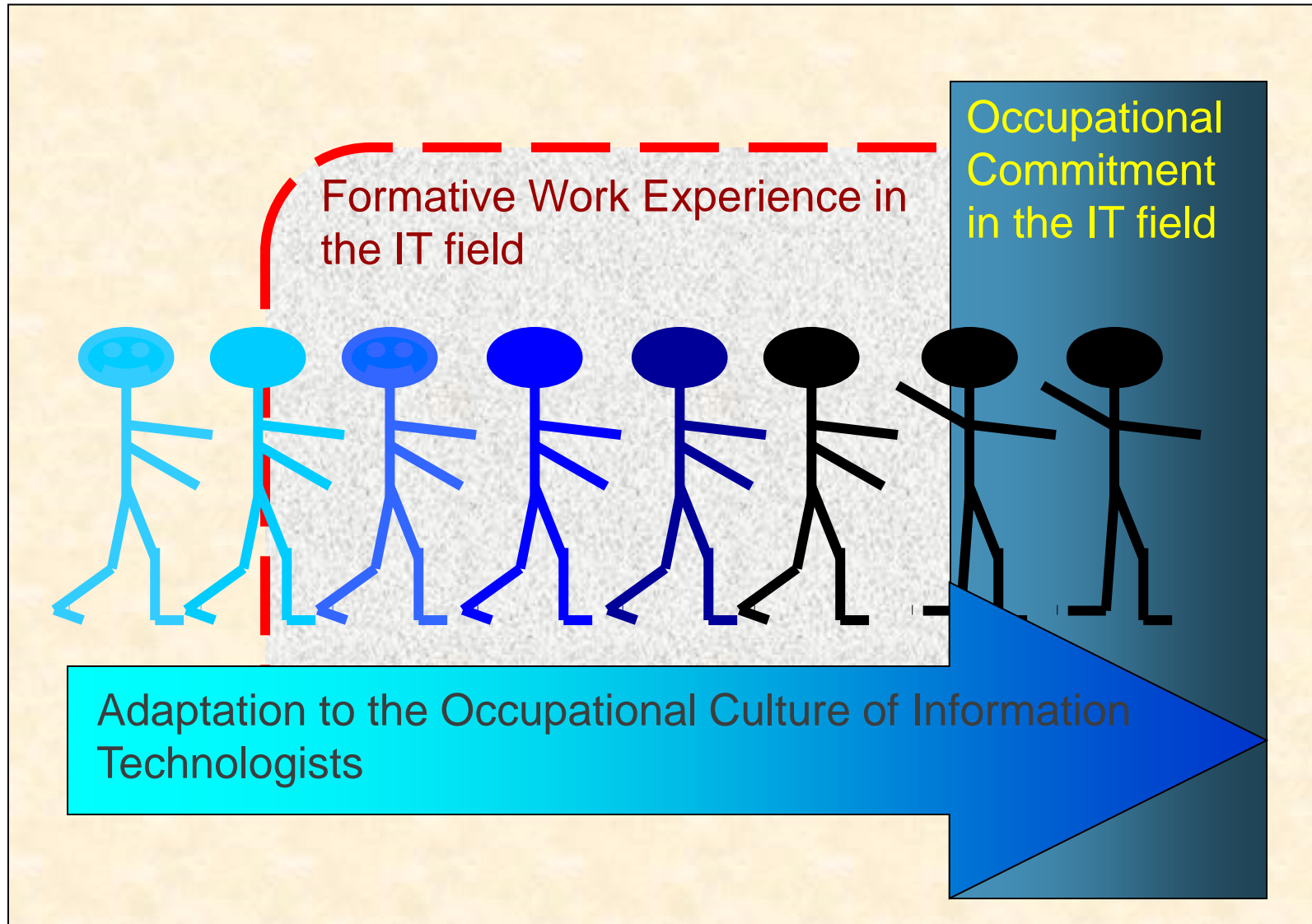
*“... I don't want to baby-sit because people are always calling for help. But I would like to teach them how to do it.”*

# ITOC

## CHARACTERISTICS

<b>Scale Title</b>	<b>Definition</b>
<b>Stereotyping</b>	<b>Students' evaluations of the stereotypical labels of "geek" and "nerd" as applied to them and their colleagues.</b>
<b>Jargon</b>	<b>Student's evaluations of widespread use of jargon within IT occupations.</b>
<b>Demands</b>	<b>Students' perceptions of self-efficacy in meeting the demands of an IT occupation.</b>
<b>Updating</b>	<b>Students' evaluations of learning the many areas of technique and knowledge in the IT field.</b>
<b>Challenges</b>	<b>Students' evaluations of the need to adapt to new problems, long hours, and constant change.</b>
<b>Status</b>	<b>Students' evaluations of the social status benefits of IT expertise, particularly helping others.</b>
<b>Leisure</b>	<b>The extent to which students integrate IT into non-work leisure time and socializing.</b>

# Is there a Culture Clash?

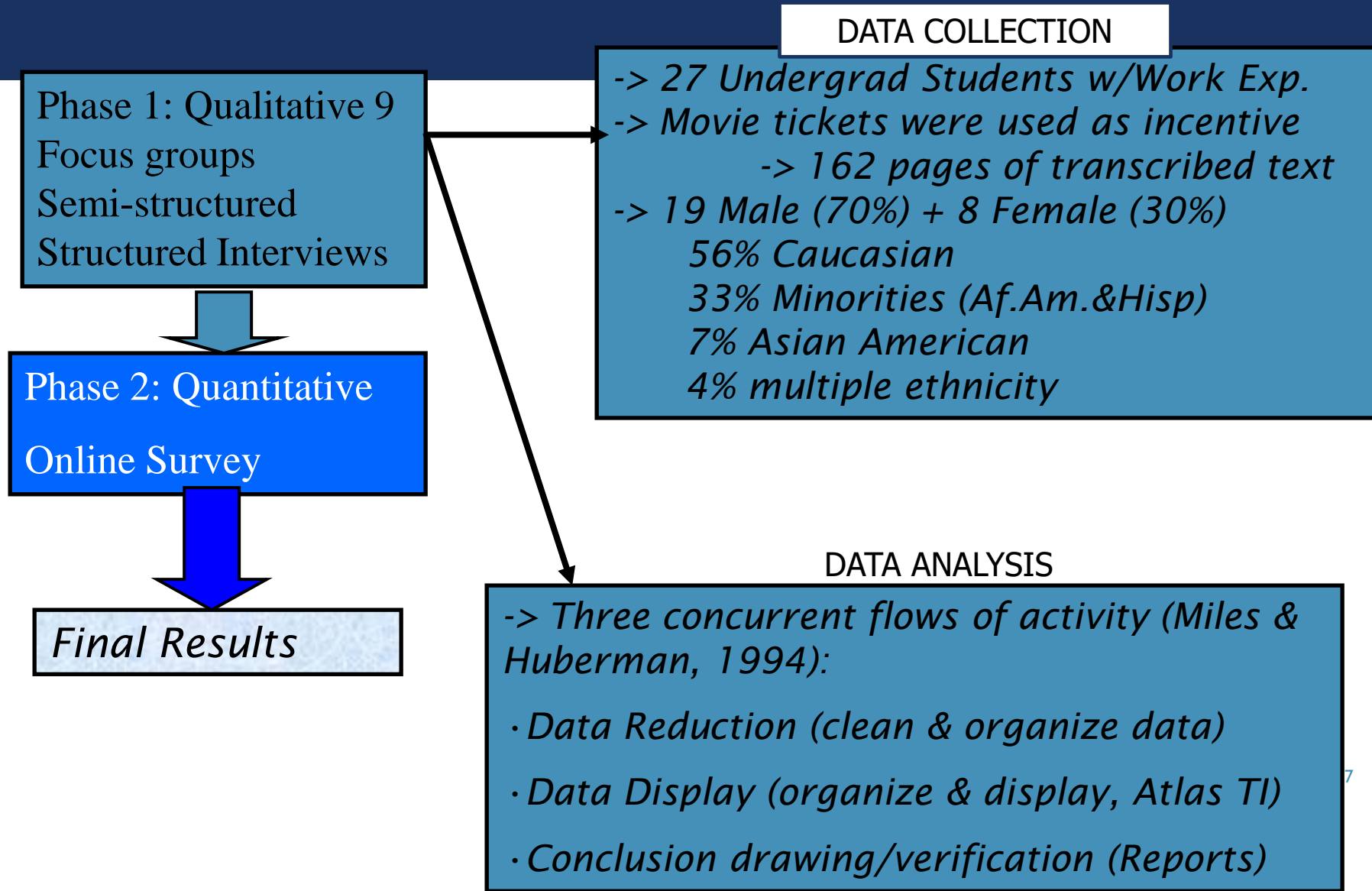




# RESEARCH QUESTIONS

- I. What are the subcultural characteristics perceived among college students as they obtain their first work experiences in IT?
- II. Given that several of the manifestations have potentially negative connotations (e.g., long work hours, need for constant re-education), what are college students' reactions to these subcultural characteristics?
- III. How different are those reactions between men and women?
- IV. How different members of minority groups experience the acculturation process?
- V. How these reactions influence occupational commitment?

# SEQUENTIAL MIXED METHODOLOGY



# IT OCCUPATIONAL CULTURE

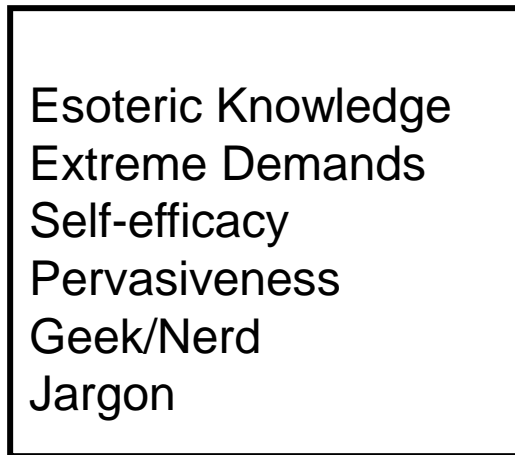
*Students with no work experience were not able to tell us about the norms, values and cultural forms of the occupation because they were not familiar with them).*

<b>GROUP DIMENSION</b>	<b>MANIFESTATIONS OF IT OCCUPATIONAL COMMUNITY</b>
<b>Value of Technical Knowledge</b>	<b>Proud of restricted IT skills and abilities; Great value of technical knowledge</b>
<b>Extreme and Unusual Demands</b>	<b>Like challenge. Enjoyment of dealing with difficult tasks, long hours, constant change, and need for constant self re-education</b>
<b>Self Efficacy</b>	<b>Confidence of meeting the demands of an IT occupation</b>
<b>Pervasiveness</b>	<b>Integration of IT in non-work activities. Use IT in their leisure time and socializing.</b>
<b>Geek Nerd</b>	<b>Stigmatized as nerds/geeks; shared stories about user mistakes and challenges of IT work.</b>
<b>Jargon</b>	<b>Use of IT jargon</b>

# GENERAL RESEARCH MODEL

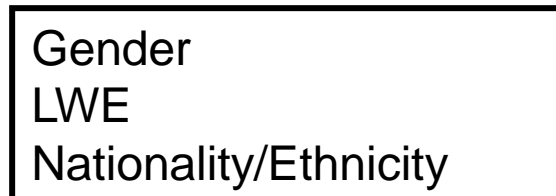
Adaptation to the IT

Occupational Culture

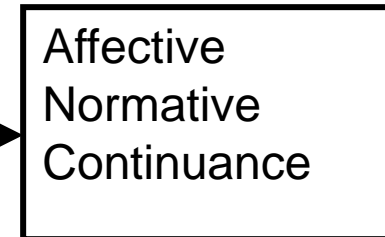


Independent  
Variables

Control  
Variables



Occupational  
Commitment



Dependent  
Variable

# OCCUPATIONAL COMMITMENT

*The strength of motivation to work in a chosen career role (Hall, 1976) and to the attachment an individual has to an occupation (Cable & DeRue, 2002).*

*The three dimensions for Occupational Commitment are:*

- *Affective commitment: a person's emotional attachment to their occupation. (they want to)*
- *Continuance commitment: involves the individual's assessment of the cost associated with leaving one's occupation. (they need to)*
- *Normative commitment: is a person's sense of obligation to remain in their occupation. (ought to do so)*

# PHASE 2: QUANTITATIVE

## SURVEY DEVELOPMENT

Phase 1: Qualitative 9  
Focus groups  
Semi-structured  
Structured Interviews

-> *Iterative process of item generation*  
-> *4 iterations for scales with 4-8 items*  
-> *Two-stage pretests: 12 and 21 participants*

Phase 2: Quantitative  
Online Survey

## DATA COLLECTION

-> *Recruitment of Participants:*  
- *Invitation to potential participants n=1605 students*  
- *Invitation to hiring institutions 127 businesses -> 556 eligible students*  
-> *Incentive: Drawing of an Apple IPOD-Shuffle*  
-> *Received 230 responses, N=215 usable*

*Final Results*

# ITOC

## CHARACTERISTICS

Scale Title	Definition	# of Items	Scale Reliability
<b>Stereotyping</b>	<b>Students' evaluations of the stereotypical labels of "geek" and "nerd" as applied to them and their colleagues.</b>	<b>6</b>	<b>.70</b>
<b>Jargon</b>	<b>Student's evaluations of widespread use of jargon within IT occupations.</b>	<b>3</b>	<b>.74</b>
<b>Demands</b>	<b>Students' perceptions of self-efficacy in meeting the demands of an IT occupation.</b>	<b>8</b>	<b>.92</b>
<b>Updating</b>	<b>Students' evaluations of learning the many areas of technique and knowledge in the IT field.</b>	<b>6</b>	<b>.92</b>
<b>Challenges</b>	<b>Students' evaluations of the need to adapt to new problems, long hours, and constant change.</b>	<b>5</b>	<b>.72</b>
<b>Status</b>	<b>Students' evaluations of the social status benefits of IT expertise, particularly helping others.</b>	<b>7</b>	<b>.85</b>
<b>Leisure</b>	<b>The extent to which students integrate IT into non-work leisure time and socializing.</b>	<b>6</b>	<b>.82</b>

# RESULTS IN THE US (N=215)

Do men and women experience the acculturation process differently?

Do members of minority groups experience the process differently than those in the majority?

Variable Name	Males	Females	t	Ethnic Majority	Ethnic Minority	t
Stereotyping	3.78	3.77	.11	3.88	3.45	-2.20*
Jargon	4.78	4.65	.85	4.70	4.93	1.26
Demands	4.87	4.58	2.39**	4.78	4.81	.21
Updating	5.22	5.01	1.79	5.24	4.87	-1.71
Challenges	4.18	4.03	1.23	4.12	4.09	-.17
Status	4.72	4.73	.04	4.77	4.60	-.91
Leisure	3.92	3.46	2.87**	3.88	3.53	-1.40

\*p<.05, \*\*p<.01

- Males reported higher self-efficacy concerning demands of the occupation than females.
- Males indicated that they integrated IT into leisure more extensively than females.
- Ethnic minorities had a more difficult time accepting with stereotypes of Geek and Nerd.

Note: Ethnic minority: included African-Americans, Hispanic Americans, and Native Americans; Ethnic majority: included Caucasians.



# MULTIPLE REGRESSION ANALYSIS RESULTS IN THE USA

Does the adjustment of newcomers to the IT occupational culture predict occupational commitment, if so how?

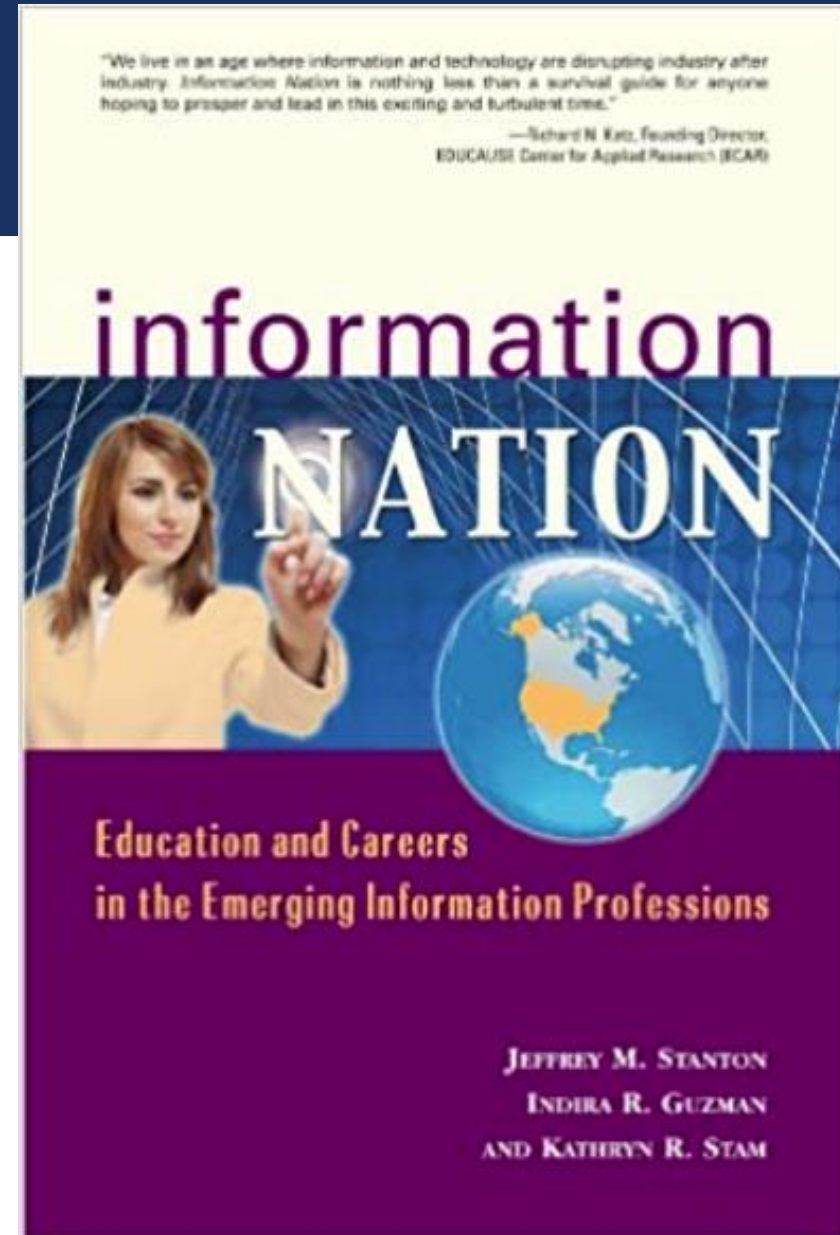
Predictors	Type of Occupational Commitment		
	Normative ( $\beta$ )	Affective ( $\beta$ )	Continuance ( $\beta$ )
Stereotyping	.01	<b>-.16**</b>	.10
Jargon	.05	-.00	-.02
Demands	-.19*	.09	-.05
Updating	-.04	.43**	.03
Challenges	<b>.26**</b>	.09	<b>.14**</b>
Status	.09	.09	.07
Leisure	.12*	<b>.17**</b>	.07
R <sup>2</sup>	.12*	.41**	.07*

- Individuals with better adaptation to the needs for constant updating felt a higher emotional attachment to their occupation. (.43\*\*)
- Enjoyment of learning and keeping up with technology and the integration of IT in leisure activities are good predictors of affective commitment. (.17\*\*)
- Participants who accept more the stereotypes of the occupation felt a lower affective commitment (-.16\*\*)
- Students who felt higher degree of enjoyment about challenges of the occupation felt a higher obligation to remain in it. (.26\*\*, .14\*\*)

## PUBLISHED BOOK

Information and IT are central to virtually every industry in which the U.S. plays a leadership role, yet colleges have failed to produce a new generation of information professionals to meet the growing need. Here, three dedicated educators present research on students and workers in the information professions. They look at barriers to inclusion and retention, analyze the forces that prevent high school and college students from gaining needed interdisciplinary skills, and tell the stories of a diverse group of students who are thriving in new majors and new jobs.

*Information Nation* provides vital insight into the future of the information society and an understanding of the educational paths and career options available to the information professional of tomorrow.



¿Por qué tan pocas mujeres en Bolivia optan por carreras universitarias relacionadas con STEM (Ciencia, Tecnología, Ingeniería y Matemáticas) y qué podemos hacer para cambiar esta situación?

**Dr. Boris Branisa C., Dra. Patricia Cabero T., Dra. Indira R. Guzmán**  
Junio de 2021



**TRIDENT**  
at American InterContinental University

# Estudios en Latinoamérica

La falta de interés de las mujeres por carreras STEM se debe a prejuicios y estereotipos de género sobre las profesiones de esta índole, y la ausencia de modelos femeninos de estas disciplinas (Arredondo et al., 2019, 145).

En México, esta diferenciación no guarda relación con el índice de desigualdad o desarrollo económico, sino a factores socioculturales (Razo, 2008)

# Factores de influencia en la elección de carreras STEM previamente encontrados en la literatura

**1. Habilidades cognitivas**

**2. Intereses o preferencias ocupacionales**

**3. Valores de estilo de vida o preferencias de equilibrio trabajo-familia**

**4. Creencias de habilidades específicas en el campo de estudio**

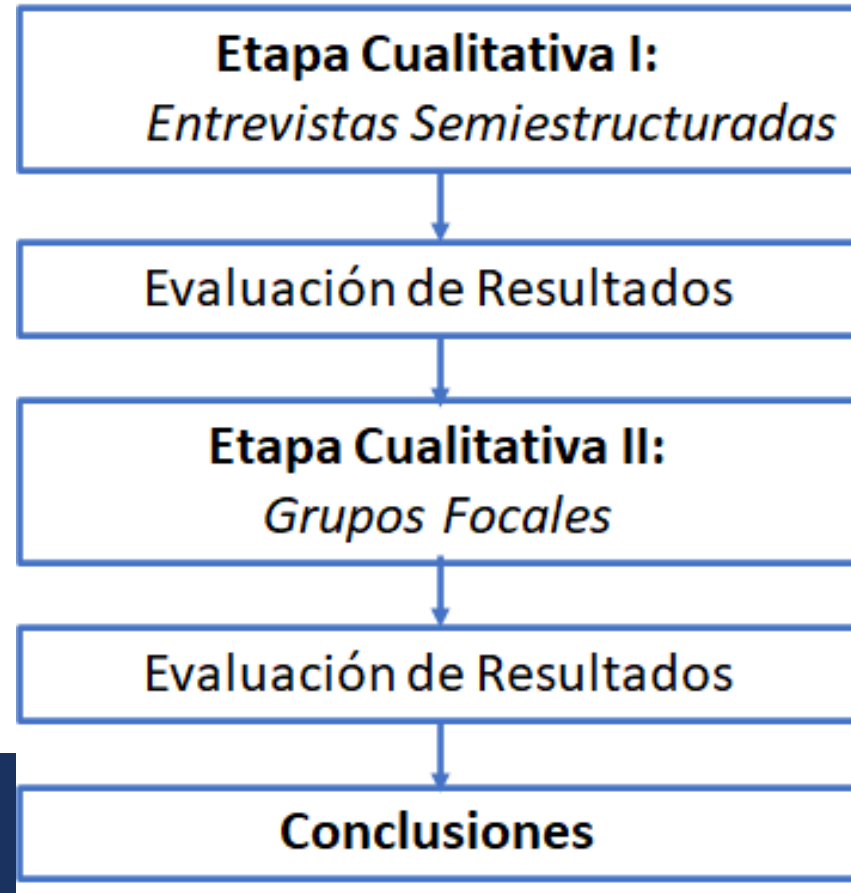
**5. Estereotipos y prejuicios relacionados con el género**

**6. Fortalezas cognitivas relativas**

Wang & Degol (2017)

# Metodología Mixta

Proceso secuencial utilizado en este estudio



Guzman (2008)

# Entrevistas Semi-estructuradas

- Etapa estructurada: se presentaron una serie de afirmaciones en relación a cinco de los factores de Wang & Degol (2017)
- Preguntas abiertas: opiniones en relación a las afirmaciones presentadas y sobre la situación en Bolivia

SEXO	STEM	NO STEM	TOTAL
Mujeres	2	4	6
Varones	3	6	9
<b>Total</b>	<b>5</b>	<b>10</b>	<b>15</b>

# Grupos focales

Grupo Focal	Estudiantes UCB	Estudiantes UPEA
<b>Fecha</b>	28/02/2020	12/03/2020
<b>Lugar</b>	ePC-UCB	ePC-UCB
<b>Participantes</b>	6	5
- Mujeres STEM	1 (16.7%)	1 (20.0%)
- Varones STEM	1 (16.7%)	1 (20.0%)
- Mujeres NO STEM	1 (16.7%)	2 (40.0%)
- Varones NO STEM	3 (50.0%)	1 (20.0%)
<b>Moderadores</b>	3	3
<b>Observadores no participantes</b>	1	1



# Sobre los factores encontrados en la literatura

Factores de influencia	Entrevistas	Grupos focales
(i) Habilidades cognitivas	Poca evidencia	Cierta evidencia
(ii) Intereses o preferencias ocupacionales	Cierta evidencia, no muy marcada	Ninguna evidencia
(iii) Valores de estilo de vida o preferencias de equilibrio trabajo-familia	Evidencia fuerte	Evidencia fuerte
(iv) Creencias de habilidades específicas en el campo de estudio	Ninguna evidencia	Cierta evidencia
(v) Estereotipos y prejuicios relacionados con el género	Cierta evidencia, no muy marcada	Evidencia fuerte

## Otros factores encontrados

Factores de influencia	Entrevistas	Grupos focales
La discriminación (por sexo) en el mercado laboral	Evidencia fuerte	Evidencia fuerte
El rol de los padres en la elección de la carrera	Cierta evidencia, no muy marcada.	Evidencia fuerte
El rol de los costes del estudio	Sin evidencia	Evidencia fuerte
La importancia de la formación en el colegio	Sin evidencia	Cierta evidencia, no muy marcada

# FUNDING ORGANIZATIONS THAT SUPPORT RESEARCH IN THIS AREA

## National Science Foundation in the United States

- ADVANCE: Organizational Change for Gender Equity in STEM Academic Professions (ADVANCE).



**IDRC • CRDI**

International Development Research Centre  
Centre de recherches pour le développement international

## International Development Research Center (IDRC) in Canada.

- The Gender in STEM Research Initiative - Advancing gender analysis and women's leadership in STEM fields from public universities from low- and middle-income countries (LMICs) in Africa, Asia, or Latin America/Caribbean.

# LATIN AMERICAN OPEN DATA FOR GENDER EQUALITY POLICIES FOCUSING ON LEADERSHIP IN STEM – “ELLAS”

- 2021-Co-Authored the Grant Proposal # 109798 entitled “Latin American Open Data for Gender Equality Policies Focusing on Leadership in STEM” submitted to the International Development Research Centre (IDRC) in Canada for the Gender in STEM Research Initiative aimed to reduce the gender gap in IT leadership in Latin America. Our proposal won a \$1 USD million grant for a research project that will be conducted in Brazil, Bolivia and Peru from March 2022 to March 2025 Principal Investigators include Cristiano Maciel from the Universidade Federal de Mato Grosso (UFMT) in Brazil, Boris Branisa from the Catholic University of Bolivia, and Nadia Rodriguez from Universidad de Lima in Peru.

## “ELLAS” PROJECT – 2022 TO 2025

- Title: **Latin American Open Data for gender equality policies focusing on leadership in STEM**
- Theme(s): **Advancing institutional policies to promote gender equality in STEM**
- Lead applicant institution: **Universidade Federal de Mato Grosso / UNISELVA Foundation**
- Countries of research: **Bolivia, Brazil, Peru**
- Project duration: **36 months**
- Total budget request to IDRC: **1,250,000 CAD**

## “ELLAS” PROJECT – MAIN OBJECTIVE

- To contribute to the generation and use of cross-country **comparable open data platform** based on ontologies in order to assess policies, processes and practices **to reduce the gender gap in STEM, to promote public discussion** aimed to **increase the number of female leaders at universities, industries, and public institutions** in three Latin American countries: Bolivia, Brazil and Peru.

# ELLAS PROJECT: UNIVERSITIES



**IDRC • CRDI**

International Development Research Centre  
Centre de recherches pour le développement international

- Universidade Federal do Mato Grosso (Brazil) - Líder
- Universidade Tecnológica Federal do Paraná (Brazil)
- Universidade Federal Fluminense (Brazil)
- Universidade Federal Santa Catarina (Brazil)
- Universidad Mayor de San Andrés (Bolivia)
- Universidad Católica Boliviana San Pablo (Bolivia)
- Universidad de Lima (Peru)



# Project Organization - Outcomes

## 2022 PHASE 1

Systematic literature review

Policies mapping

Survey application

Design of the open data platform

Additional data collection

Seminars and workshops

## 2023 PHASE 2

Platform development

Project Website

Dashboards on the Platform

Ontologies

Workshops and Seminars

## 2024 PHASE 3

A STEM Leadership Guide available online

A document with policy recommendations

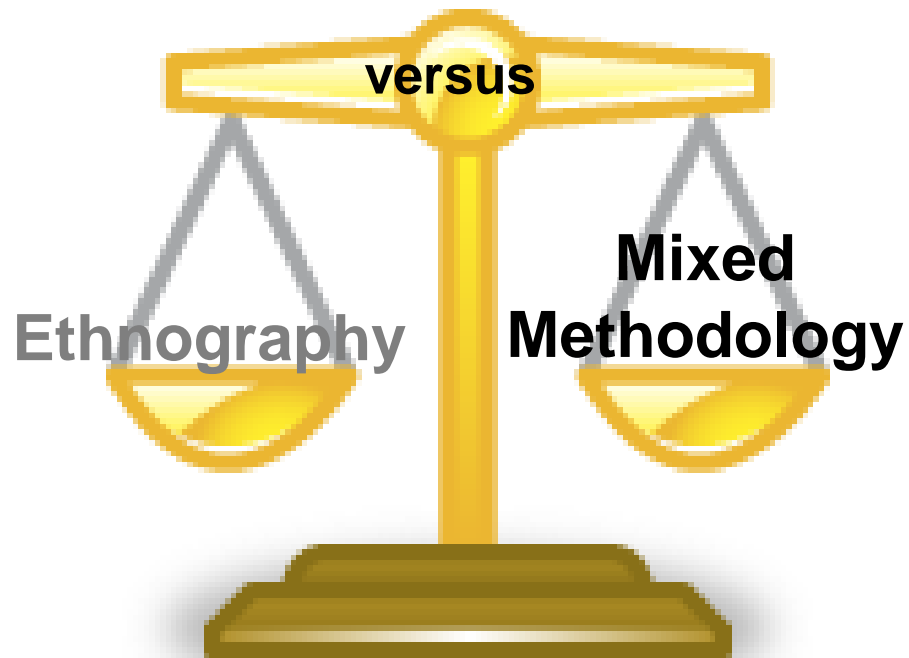
Seminars and workshops

A "STEM Leadership Forum"

A small pilot project implemented



## MIXED METHOD APPROACHES: ACCESS, TIME, BUDGET...



**Broader, more generalizable insights**

**Combines qualitative and quantitative methods**

**Diverse data collection methods;  
Moderate data volume**

**Integration challenges across types of data**

**Phased design but in less time, with lower overall costs**

**Multiple publication points**

## PROPUESTAS Y SUGERENCIAS

- Colaborar entre instituciones que realizan esfuerzos de investigaciones relacionadas a mujeres en STEM/IT
- Utilizar estudios realizados en otros países como base para avanzar el conocimiento.
- Conducir estudios locales para entender mejor los factores de cada entorno específico
- Utilizar metodologías científicas de la investigación cualitativas y cuantitativas para obtener amplitud y profundidad de los estudios
- Promover la participación de nuestras comunidades en los estudios (hombres y mujeres).
- Promover una cultura de conocimiento y continuo aprendizaje
- Difundir los resultados obtenidos
- Tomar decisiones basadas en evidencia

[Indira.guzman@trident.edu](mailto:Indira.guzman@trident.edu)

Thank you – Gracias – Спасибо - Obrigada



Do you have any  
questions or  
comments?

[Indira.guzman@trident.edu](mailto:Indira.guzman@trident.edu)

## REFERENCES

1. Stanton, J., Guzman, I., and Stam, K. (2010). *Information Nation: Education and Careers in the Emerging Information Professions*. Information Today, Inc.
2. Branisa, B., Cabero, P. & Guzman, I.R. (2021). "The main factors explaining IT Career Choices of Female Students in Bolivia". *Proceedings of the Twenty-seventh Americas Conference of Information Systems (AMCIS)*.
3. Guzman, I; Berardi, R.; Maciel, C.; Cabero Tapia, P.; Marin-Raventos, G.; Rodriguez, N.; and Rodriguez, M, "Gender Gap in IT in Latin America" (2020). *Proceedings of the Twenty-sixth Americas Conference of Information Systems*. <https://aisel.aisnet.org/amcis2020/panels/panels/4>
4. Guzman, I. R., & Stanton, J. M. (2009). IT Occupational Culture: The Cultural Fit and Commitment of New Information Technologists. *Information Technology & People*, 22(2), 157-187.
5. Guzman, I. R. (2008). Metodologia Mixta en Sistemas de Informacion: El caso del Estudio de la Cultural Ocupacional de Sistemas (Mixed Methodology in Information Systems Research: the study of the IT Occupational Culture). *Revista Latinoamericana y del Caribe de la Asociacion de Sistemas de Informacion (Latin American and Caribbean Journal of the Association of Information Systems (AIS)*, 1(1), 11-30.
6. Guzman, I. R., & Stanton, J. M. (2008). Women's Adaptation to the IT Culture. *Women's Studies: Special Issue on Women and Technology*, 37(3), 202-228.
7. Guzman, I. R., Stam, K. R., & Stanton, J. M. (2008). The Occupational Culture of IS/IT Personnel within Organizations. *The DATA BASE for Advances in Information Systems*, 39(1), 33-50.
8. Kaarst-Brown, M. L., & Guzman, I. R. (2008). *Decisions, Decisions: Ethnography or Mixed-Method Approaches to Study Cultural Issues in IS Research?* Proceedings of the Cultural Attitudes towards Technology and Communication (CATaC) conference, June 24-28, Nimes, France.