

# Building Research Culture in Philippine Higher Education: A Systems Action Research Approach

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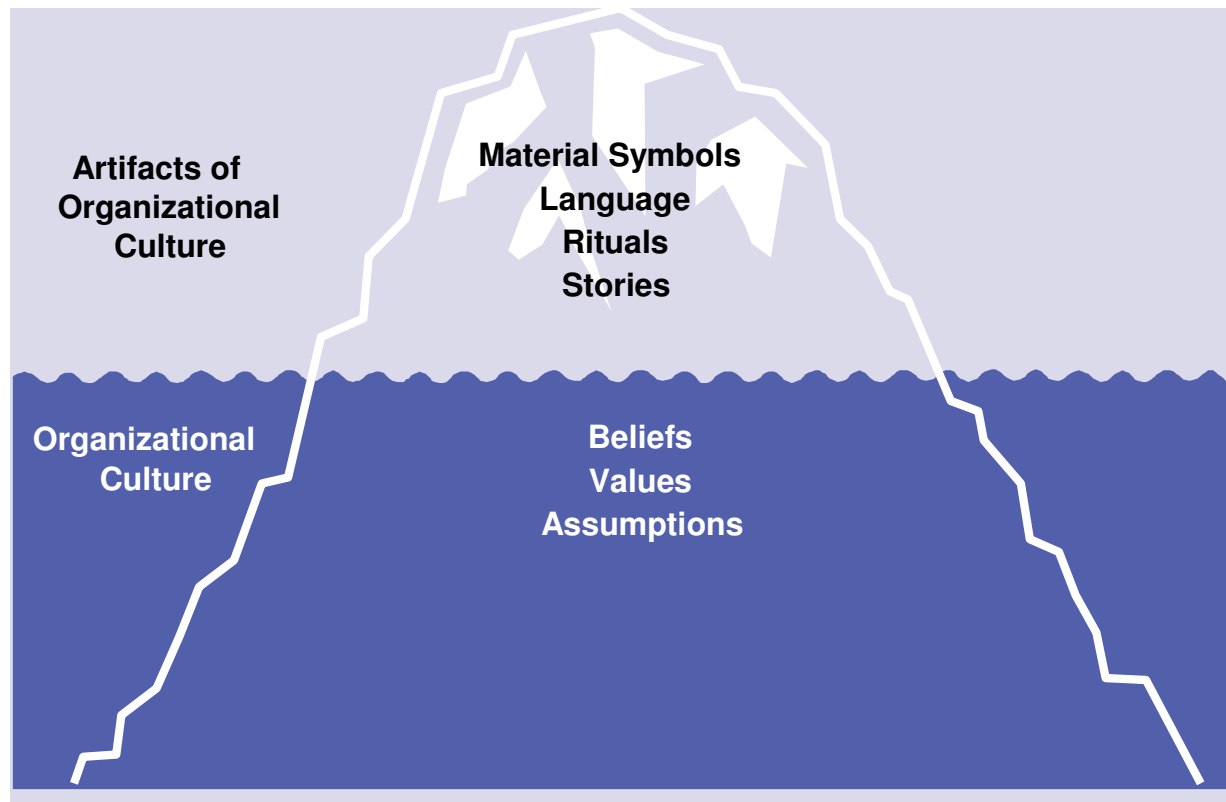
# Outline

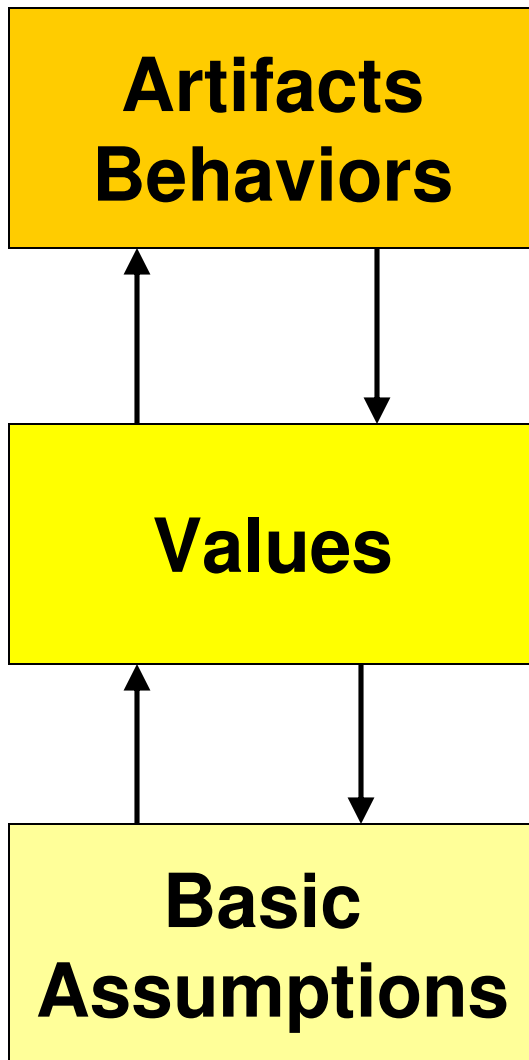
1. The role of research cultures in higher education
2. Fundamentals of culture analysis: Key constructs
3. A system dynamics perspective on research productivity
4. Overview of research process for study
5. Preliminary case results
6. Towards intervention approaches:
  1. Developing research culture leadership
  2. Expanding research paradigms
  3. Developing value systems and knowledge ecologies

# The Role of Research Cultures in Higher Education

1. Research is a core activity of HEIs but is notoriously neglected
2. For research to be sustained, it must be part of the HEI's way of institutional history and life – its culture
3. HEI administrators need to have a holistic understanding of how research becomes embedded in their cultures – individually-targeted external incentives are not enough and knee-jerk responses can be counter-productive
  - Research is not the end in itself – it must be utilized for teaching and service
  - Research activity is facilitated not only by competence and resources but also by the social connections among HEI members – social capital
4. Understanding HEI research culture can suggest collaborative and reflective interventions for improvement, including leadership and organization development approaches

# The Culture Iceberg





Visible, but not always obvious, recognized initially, or associated with values

Generally a higher level of awareness of what is valued in the organization

Invisible, not usually stated, taken for granted

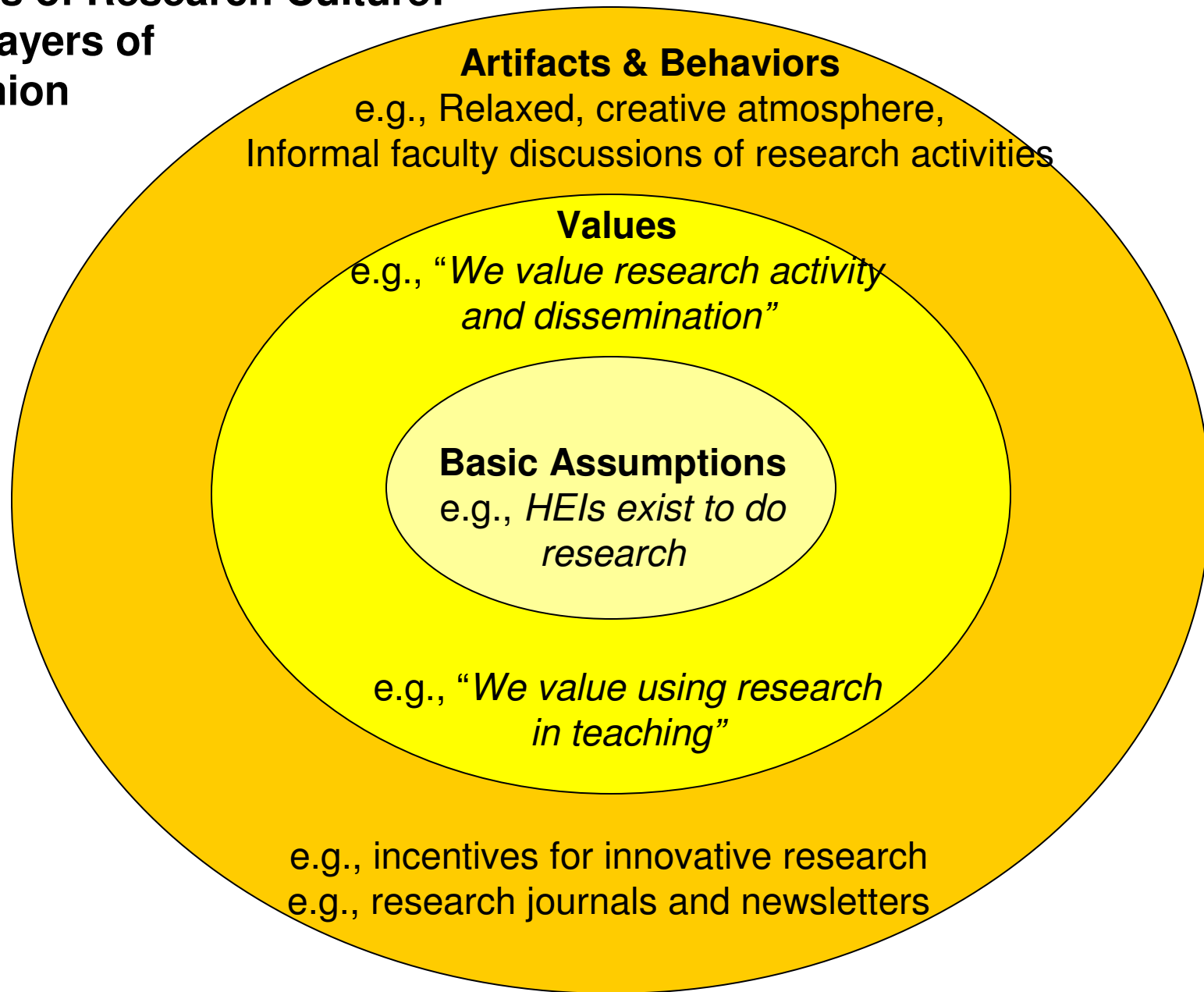
- *Based on Edgar Schein*

# Three Levels of Org. Culture

- Artifacts-- Visible organizational structures and processes (hard to decipher)
- Espoused Values-- Strategies, goals, philosophies (espoused justifications)
- Basic Underlying Assumptions-- Unconscious, taken-for-granted beliefs, perceptions, thoughts, and feelings (ultimate source of values and action)

## Layers of Research Culture:

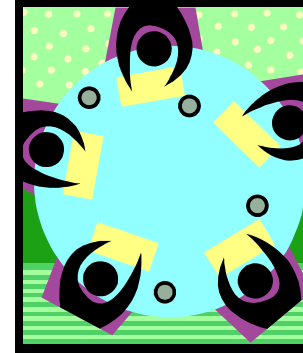
Like layers of  
an Onion



# Do Organizations Have Uniform Cultures?

## Dominant Culture

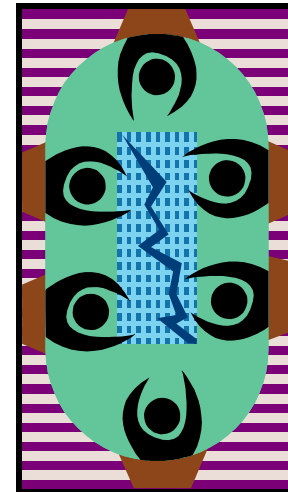
Expresses the core values that are shared by a majority of the organization's members



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## Subcultures

Minicultures within an organization, typically defined by department designations and geographical separation





# Do Organizations Have Uniform Cultures? (cont'd)

## Core Values

The primary or dominant values that are accepted throughout the organization

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## Strong Culture

A culture in which the core values are intensely held and widely shared

# What is research culture?

- The set of shared, taken-for-granted implicit assumptions that members of a HEI hold about research and that determines how they perceive, think about, and behave with respect to research activities.

- *Based on Edgar Schein*

Organizational Culture and Leadership

# **Culture embedding mechanisms: How do leaders shape culture?**

1. What leaders pay attention to, measure, and control on a regular basis
2. How leaders react to critical incidents and organizational crises
3. Observed criteria by which leaders allocate scarce resources
4. Deliberate role modeling, teaching and coaching
5. Observed criteria by which leaders allocate rewards and status
6. Observed criteria by which leaders recruit, select, promote, retire, and excommunicate organization members.

# Levels of Institutional Motivation

<b>Rule</b>	<b>Motivation</b>	<b>Involvement</b>
What gets rewarded gets done	Extrinsic gain	Calculated
What is rewarding gets done	Intrinsic gain	Intrinsic (values based)
What is good gets done	Duty or obligation	Moral

# Possible System Dynamics of HEI

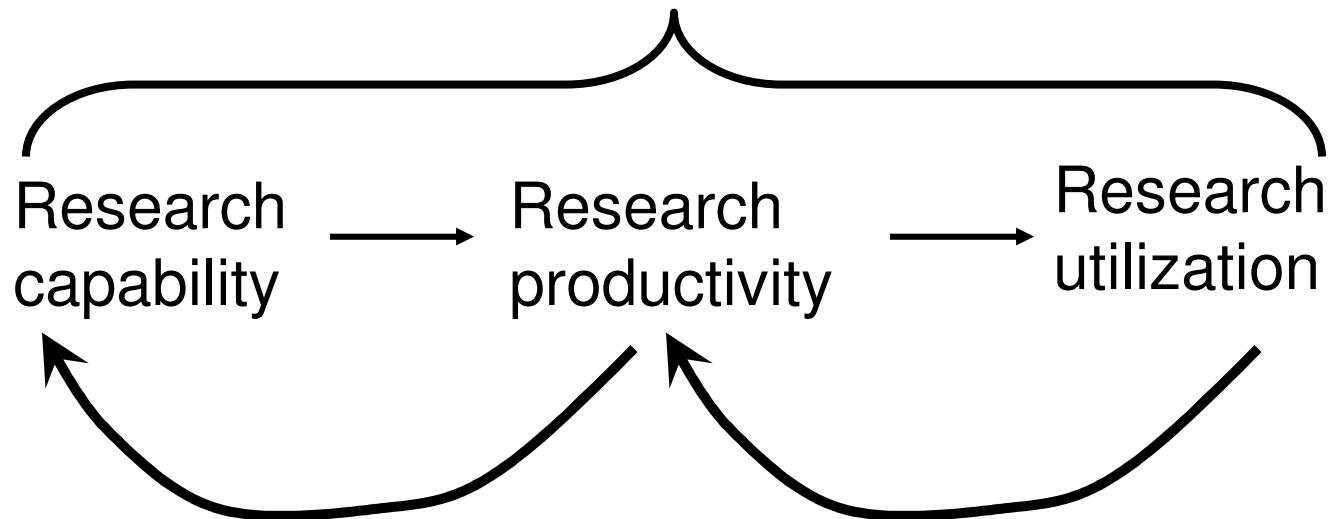
## Research

Culture-embedding  
mechanisms

Social capital



Research culture

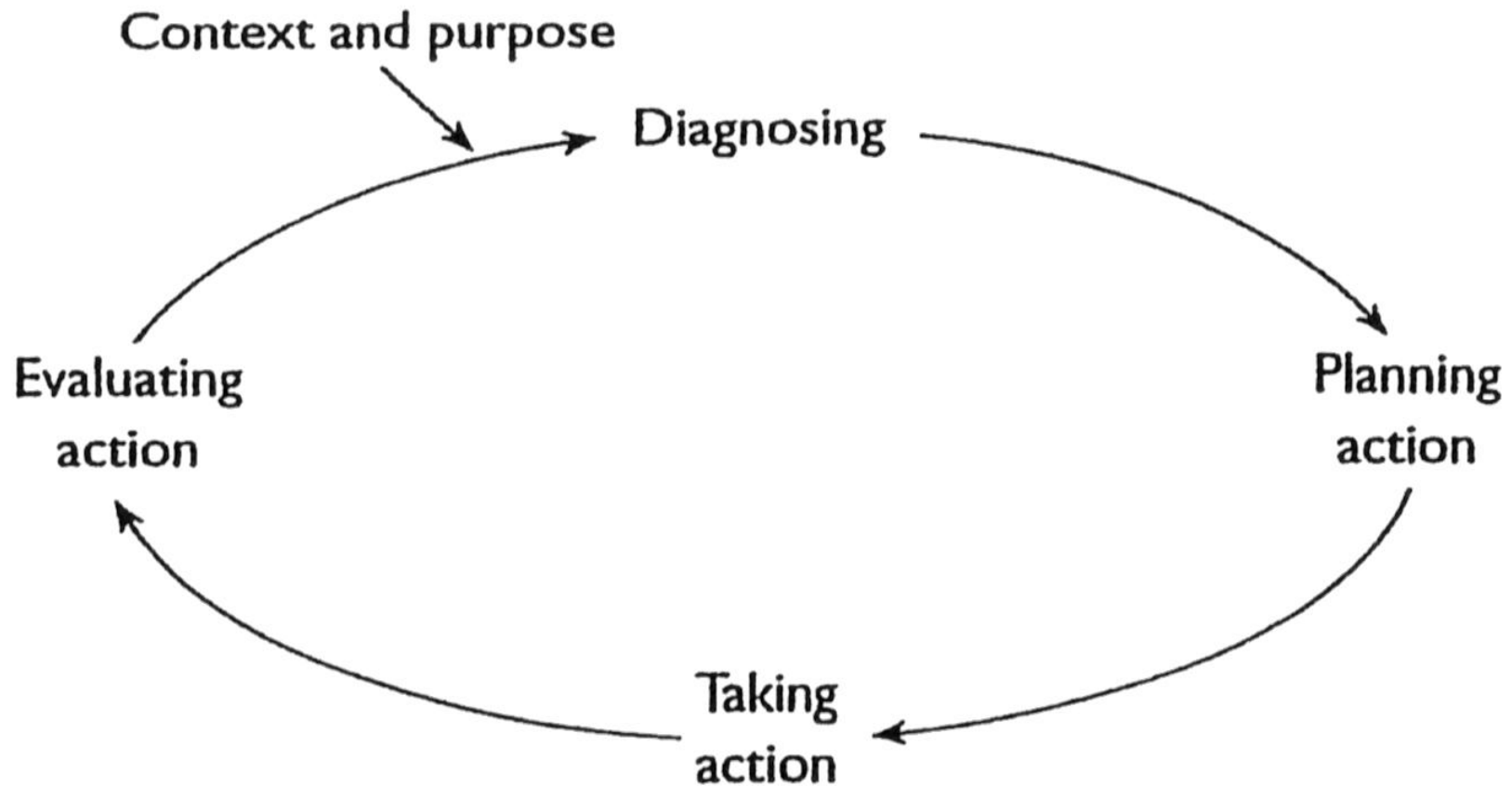


# Research Process

1. Formation of Research Teams in each member NCR HEI
2. Survey on Research Culture Artifacts: Research Capacity, Productivity and Utilization
3. Analysis of factors of Productivity and Utilization within each HEI
4. Conduct of Qualitative Research Techniques to determine 2nd level components of the Research Culture (i.e., beliefs, norms and values)
5. Integration of quantitative and qualitative findings to determine typologies of Research Cultures
6. Identification of HEI cases representing the identified typologies
7. Case study analysis of representative HEI
8. Formulation of Policy Recommendations

# Overview of Questionnaire Items and Typical Descriptive Statistics

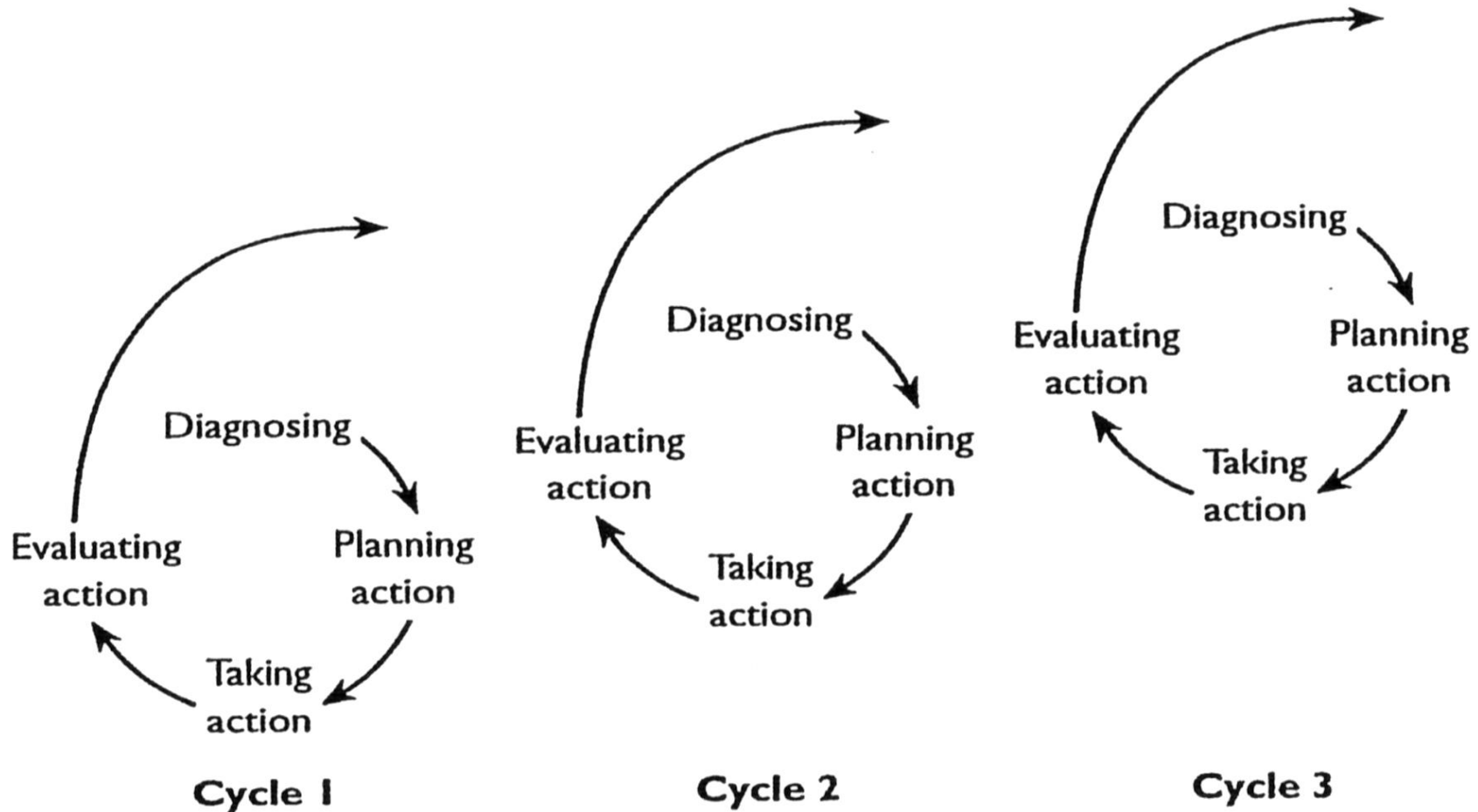
# The Action Research Cycle



Doing Action Research in Your Own Organization  
(Coghlan & Brannick, 2005)



# Spiral of Action Research Cycle



Doing Action Research in Your Own Organization  
(Coghlan & Brannick, 2005)

# Institutional carriers for research culture

- **Regulative** - Regulative carriers relate to binding *rules* that establish and render mandatory new practices.
  - E.g. HEI mandates research output for permanency or promotion; HEI implements incentive rules for research outputs
- **Normative** - Normative carriers, which shape values and expectations in a field professional a field, include the definition of a professional identity, membership strategies, and the establishment of standards.
  - Eg., HEI Educators' professional organizations engage their members in efforts to transform their professional practice through new modes of professional training; doctoral programs integrate publication requirements

Based on Leca, Battilana & Boxenbaum (2009)  
Agency and Institutions; Scott (2008) Institutions and Organizations

Preliminary profile of a  
research culture:

# Respondents

- N = 215
- Age = 39 (SD = 15.17), 59% females
- Civil status: 32% single, 61% married
- Academic rank: 8% professors, 20% associate prof., 30% asst. profs., 20% instructors, 16% others, the rest not indicated

# Work hour patterns

	<b>Mean</b>	<b>SD</b>
Work hours per week	25.72	15.84
% of work hours spent on teaching	71.72	27.39
% spent on doing research	16.90	12.91
% spent doing administrative work	21.48	25.24
% spent for extension activities	14.69	14.71

# Research productivity of respondents

	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
Pub-local	55	1.42	1.31
Pub-inter	25	0.40	0.87
Pub-books	50	1.52	1.64
Pub-mono	31	1.16	1.57
Pub-manual	49	1.55	1.93
Paper-local	52	1.77	2.11
Paper-inter	35	0.94	1.16
Mentored	62	11.60	32.24
Patent	26	1.08	2.15
Policy papers	30	1.50	3.72
Workshops	77	5.01	6.57
Consult	66	6.97	14.72
Tech	20	0.50	1.15

Analysis based on the  
objectives

# **Objective #1: To determine pattern of research productivity**

Demographic patterns:

- Males presented papers significantly more than female faculty members
- There are no observed differences between the two sexes in terms of other types of research productivity
- Productivity levels of singles and those who are married did not significantly differ
- Research productivity is not correlated with age
- As expected those who hold higher academic ranks tend to be more productive in terms of publications, paper presentations, patents filed and technology commercialized.



# Mean differences

Types of Research Productivity	Sex	Civil status
Publications (combined)	n.s.	n.s.
Paper presentations (combined)	Males presented more	n.s.
Patents filed & Technology	(t = -2.15, 212)*	n.s.
Workshops conducted & consultancies	n.s.	n.s.

# Correlations

<b>Types of Research Productivity</b>	<b>Academic rank</b>	<b>Age</b>
Publications (combined)	-.19**	none
Paper presentations (combined)	-.20**	None
Patents filed & Technology commercialized	-.16*	None
Workshops conducted & consultancies	none	None

# Correlations with work hours and work hour patterns

- Different types of research productivity (publications, papers presented, patents, workshops and consultancies) were NOT significantly correlated to the number of work hours per week, % of work hours spent for administrative functions, or % of hours spent for extension work.
- Percentage of work hours spent for teaching has a weak negative correlation ( $r=-.18^*$ ) only with the number of papers presented but it has no correlation with publications and other types of research productivity indicators.



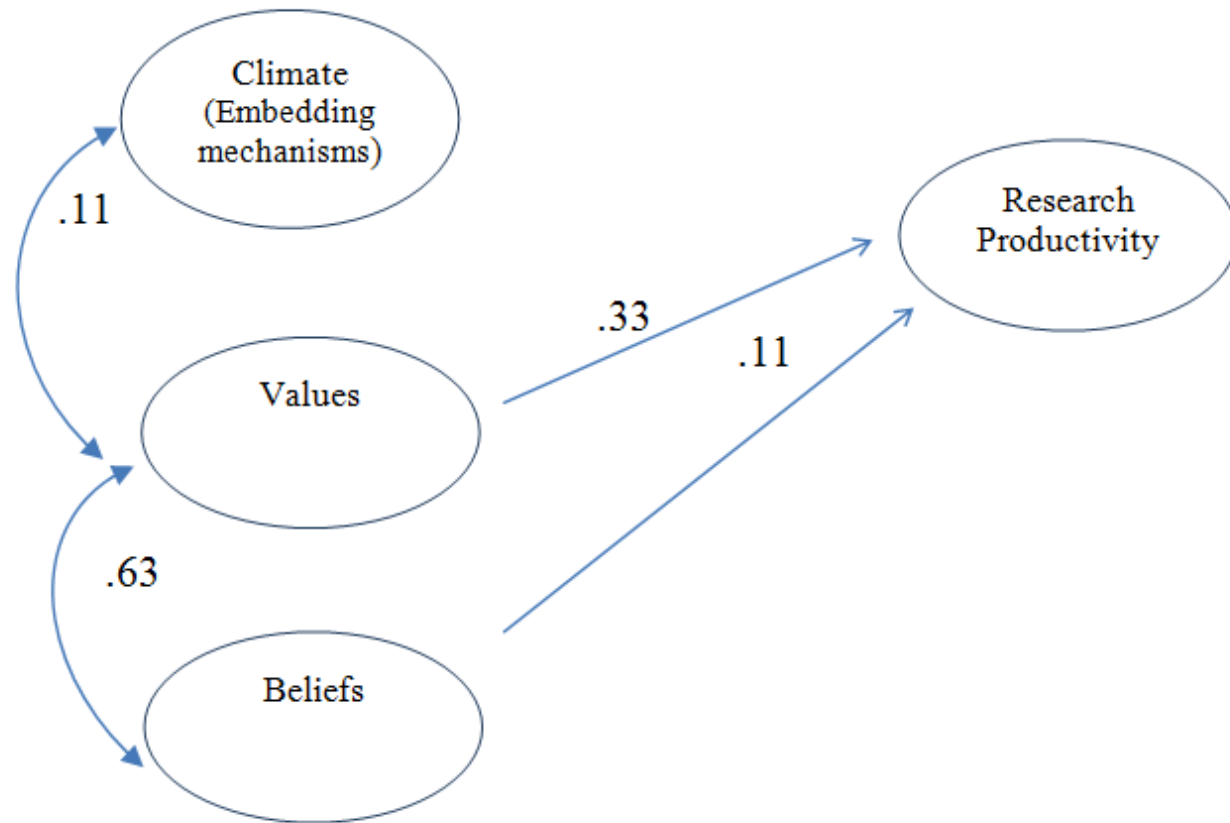
Objective #2: To analyse the underlying values, beliefs, and organizational climate that contributed to the pattern of research productivity

Variables

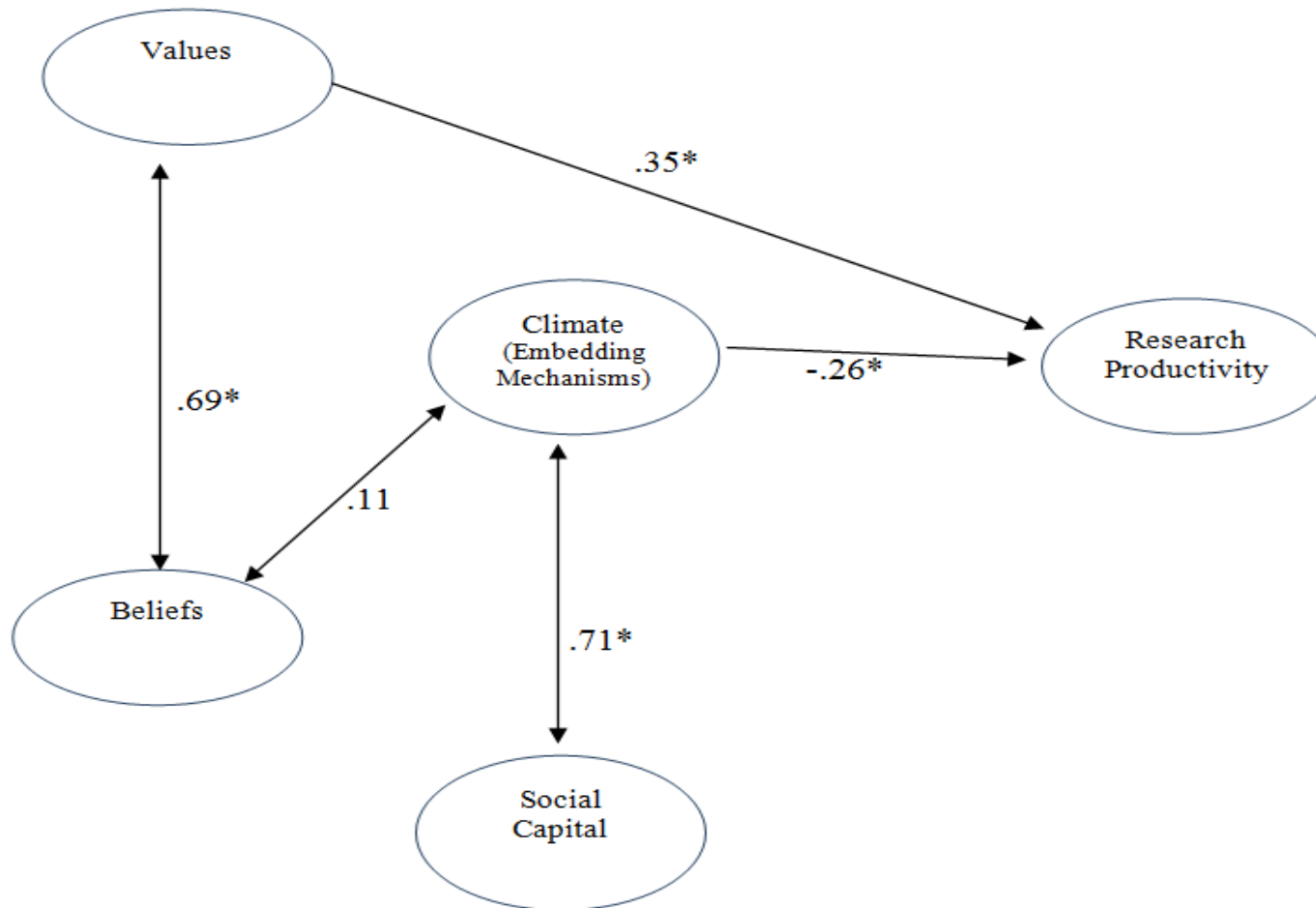
Variables	Dimensions	# of items	Scale Reliability coefficient	Mean	SD
Values	(Values) Underlying the nature of research itself research performance / achievement	3	.78	3.87	1.20
	(Values) Related to research contextual support and barriers	3	.89	4.37	1.18
	(Values) Underlying research related behavior	3	.91	4.24	1.16
	Underlying research outcome expectations	3	.88	4.26	1.24

Beliefs	Nature of organizational environment	6	.80	4.07	.60
	Acceptable levels of organizational performance	3	.85	3.53	.82
	Necessary elements for organizational success	4	.86	3.85	.77
	Nature of reality & truth	4	.87	3.76	.70
	Human relationships	4	.82	3.93	.65
Climate Perceptions (Culture Embedding mechanisms)	What leaders pay attention to, measure, and control on a regular basis	6	.93	3.35	.79
	How leaders allocate resources	2	.92	3.40	.91
	Role modelling	1	-	3.39	1.04
	How leaders allocate rewards and status	2	.84	3.49	.86
	How leaders recruit, select, promote, and excommunicate	3	.82	2.94	.85
	Articulation and reinforcement systems (contextual supports and barriers)	4	.92	3.32	.89
Social Capital	Social capital	5	.93	3.43	.80

# HEI B

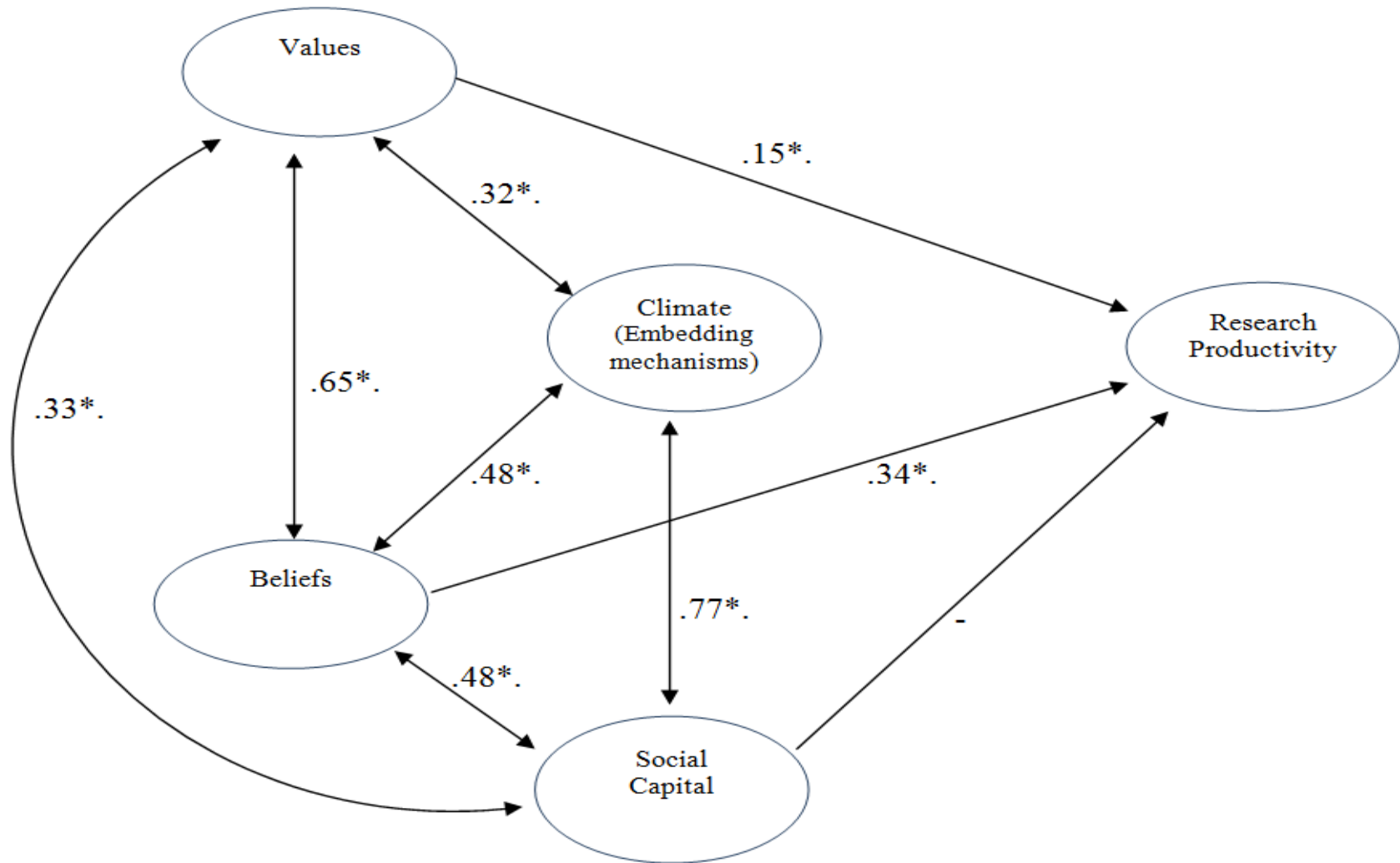


# HEI A

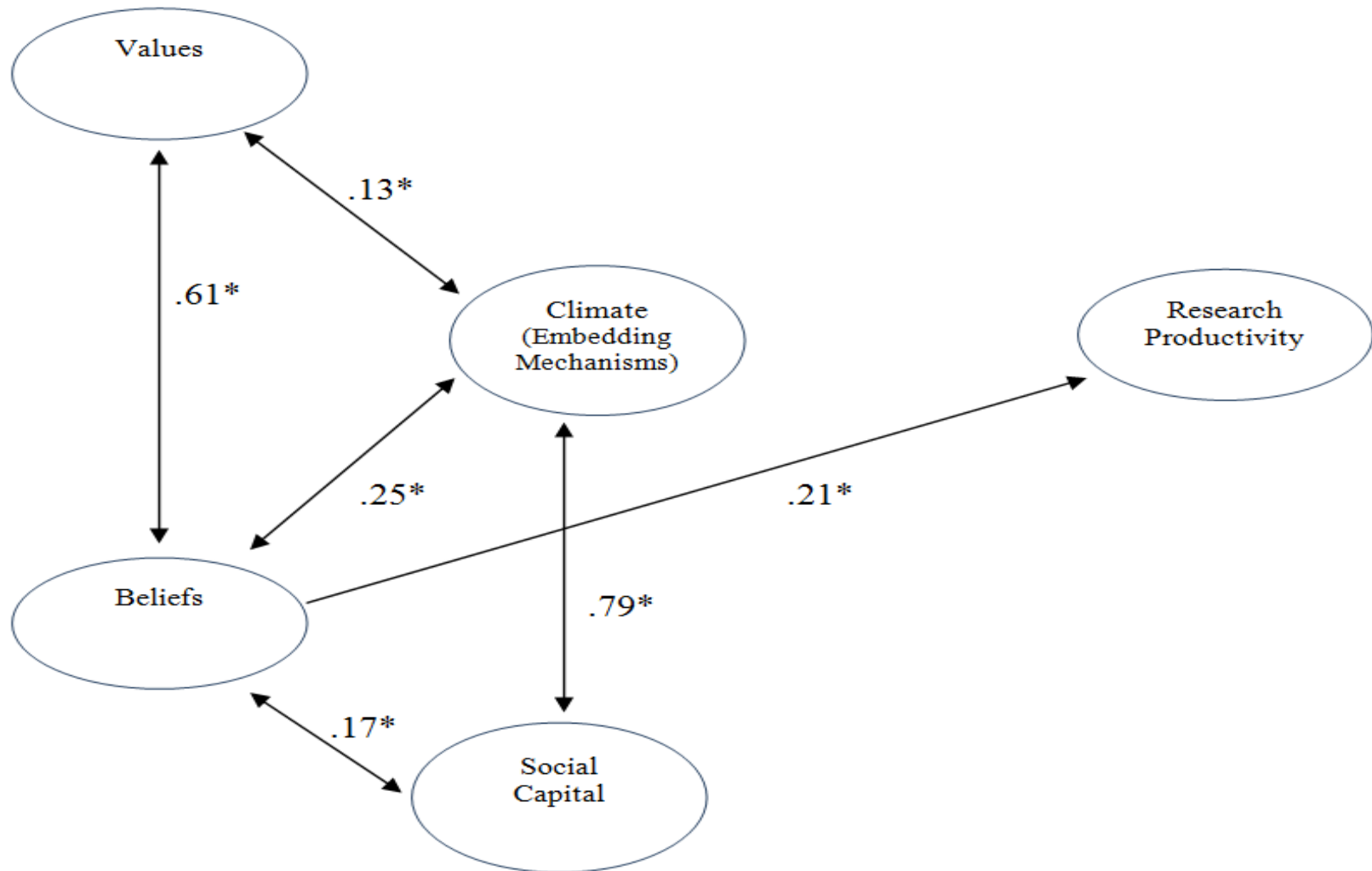




# HEI C



# HEI D



# Building Alternative Research Programs using the Boyer Framework

# Background

- There is a lack of theory/framework producing research in the country (ie, US-centric)
- Doing and publishing needed scholarly research is not easy for faculty
  - Time constraints and competing demands (e.g., teaching, administrative work, consulting)
  - Funding constraints
  - Emphasis on traditional research (e.g, hypothesis-testing with quantitative data)

# Background (cont.)

- Need for advocacy to broaden research approaches
- Alternative research approaches for the constrained faculty are now available
  - more feasible since not competing and instead integrating with other work
  - more meaningful since allows for direct and in-depth engagement with subjects, whether businesses or managers

# Traditional Research

- Usually called the hypothetico-deductive model of research
  - Review what is already known
  - Identify new settings
  - Formulate hypotheses
  - Test with quantitative data
  - Affirm or revise past knowledge

# Boyer's Framework: Types of Research

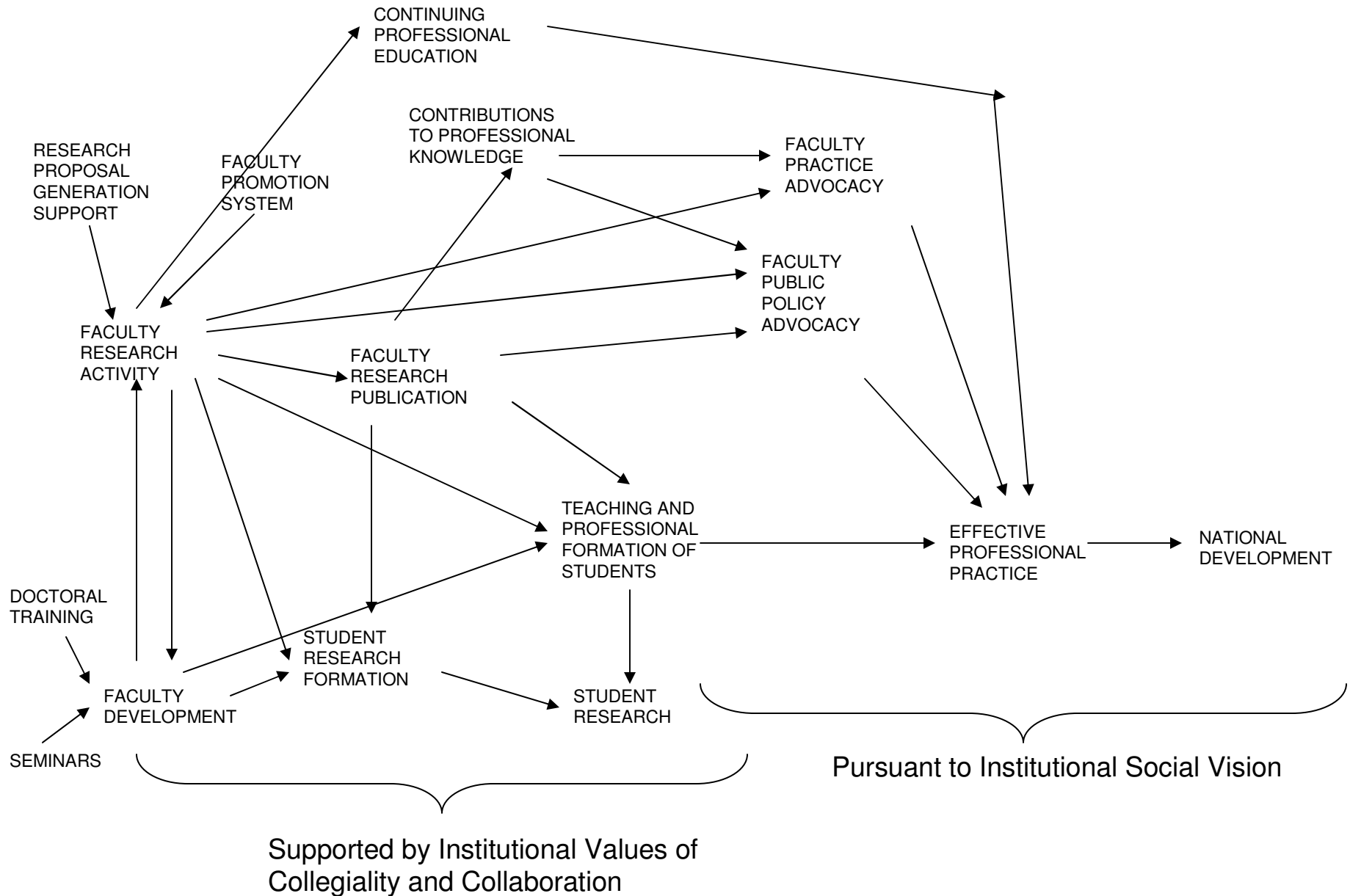
- Discovery – building and testing hypotheses
- Integration – analyzing, interpreting the state of knowledge
- Application – solving real-world problems
- Teaching – helping others learn knowledge

# Mechanisms

- Start-up
  - Promotion and financial incentives
  - Conference support
  - Public recognition
- Take-off
  - Responsibility in research direction and coaching; agenda building
- Sustaining
  - Teaching in doctoral programs
  - Institution building



# A Value Creation Systems Model of a Professional Academic Department



# Next Steps

- Complete profiling of participant schools
- Implement action research reflection within each HEI
- Support institutional leadership for research within each institution based on their peculiar situation

# Open Forum