

# **Making Sense to Make Change: Faculty Perceptions of Math Contextualization Toward Student Success in Advanced Technological Education**

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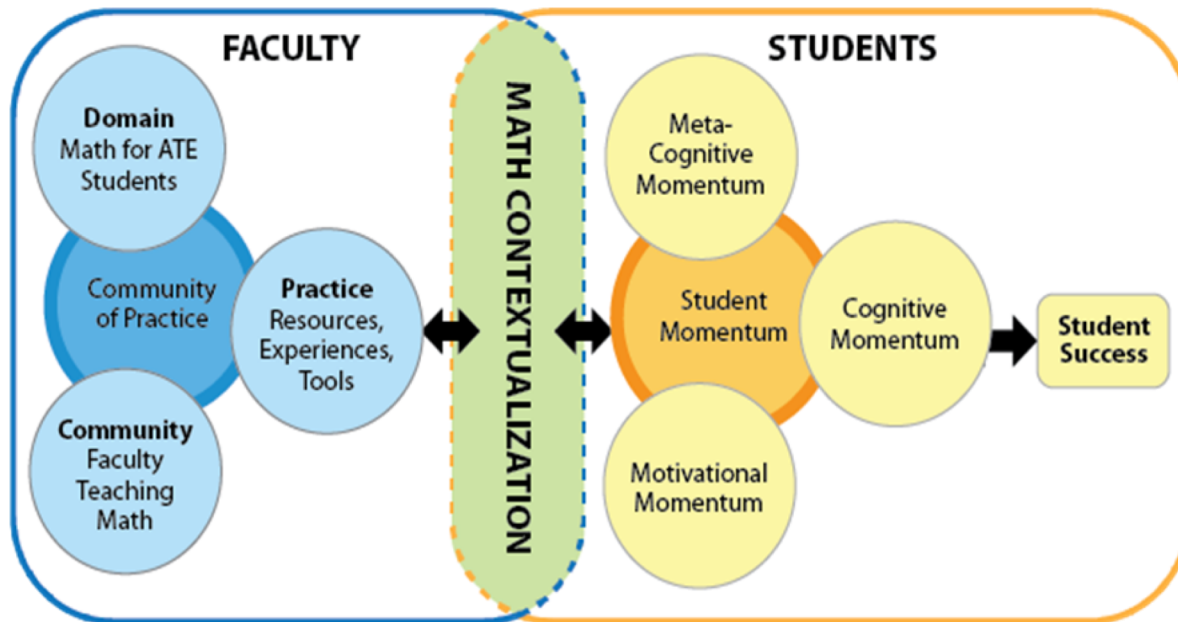
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## Contextualize to Learn: Preparing Faculty Toward Math Contextualization for Student Success in Advanced Technological Education

<https://c2l.wceruw.org/>



- Longitudinal, mixed methods study (2017-2020; NSF DUE-1700625; PI Xueli Wang)
- Partnership between 2-year colleges and university researchers

## Current Study

*(Faculty making sense of and wrestling with math contextualization)*

1. How do college math, technical education, and remedial math faculty make sense of contextualization applied to teaching math as a result of related professional development?
2. How does faculty interpretation of contextualization influence their plans around adopting it to their math teaching?

## Conceptual Framework

- Organizational change to explore meaning-making and subsequent change to math teaching
- Organizational change complex and multidimensional (Levin, 1998)

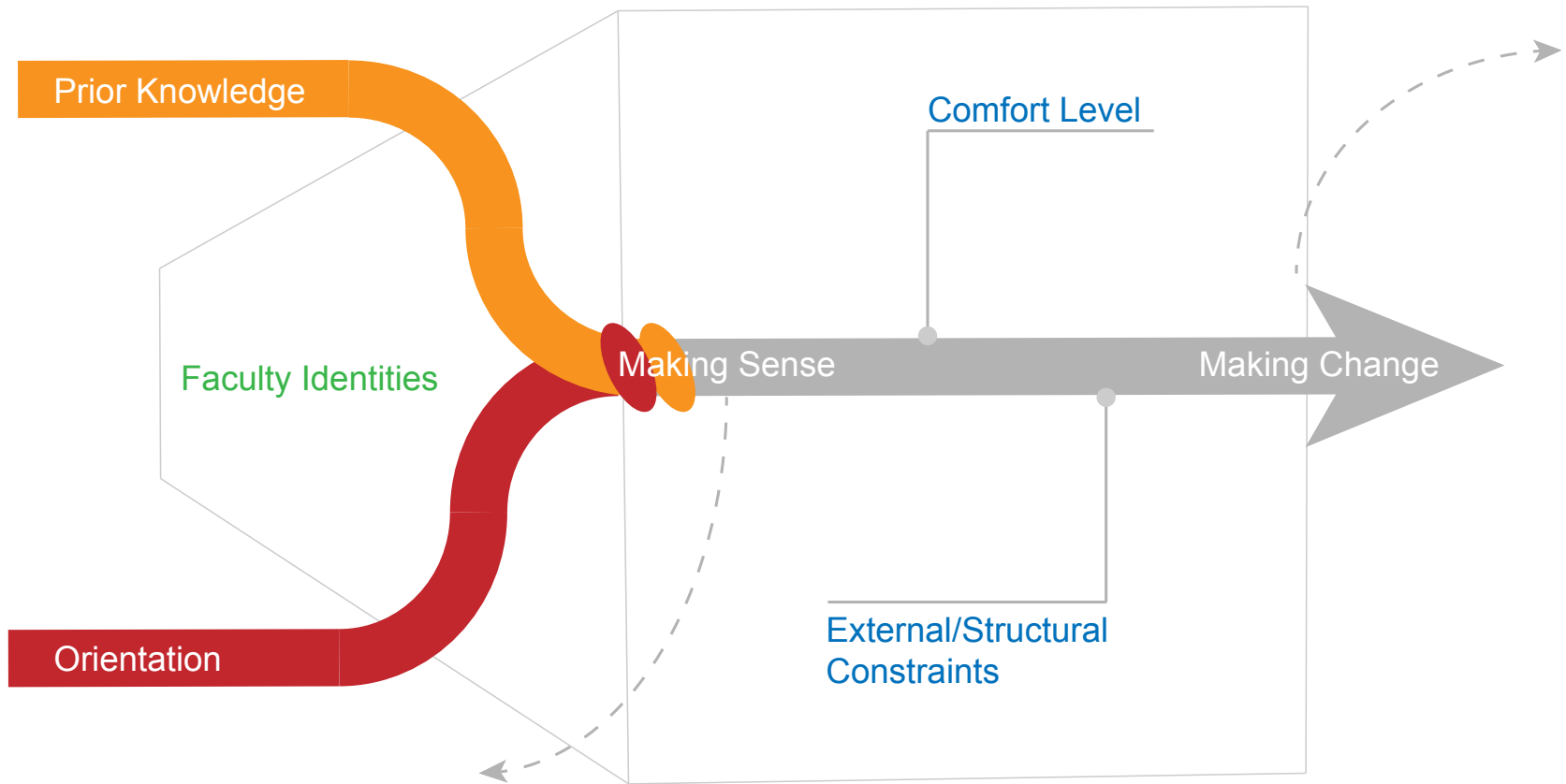
## Design and Data Collection

- Multiple case study approach
- In-person interviews with faculty
- Observations, field notes, professional development & instructional materials, and meeting minutes
- Detailed descriptions and contexts
- Initial coding toward categories and themes

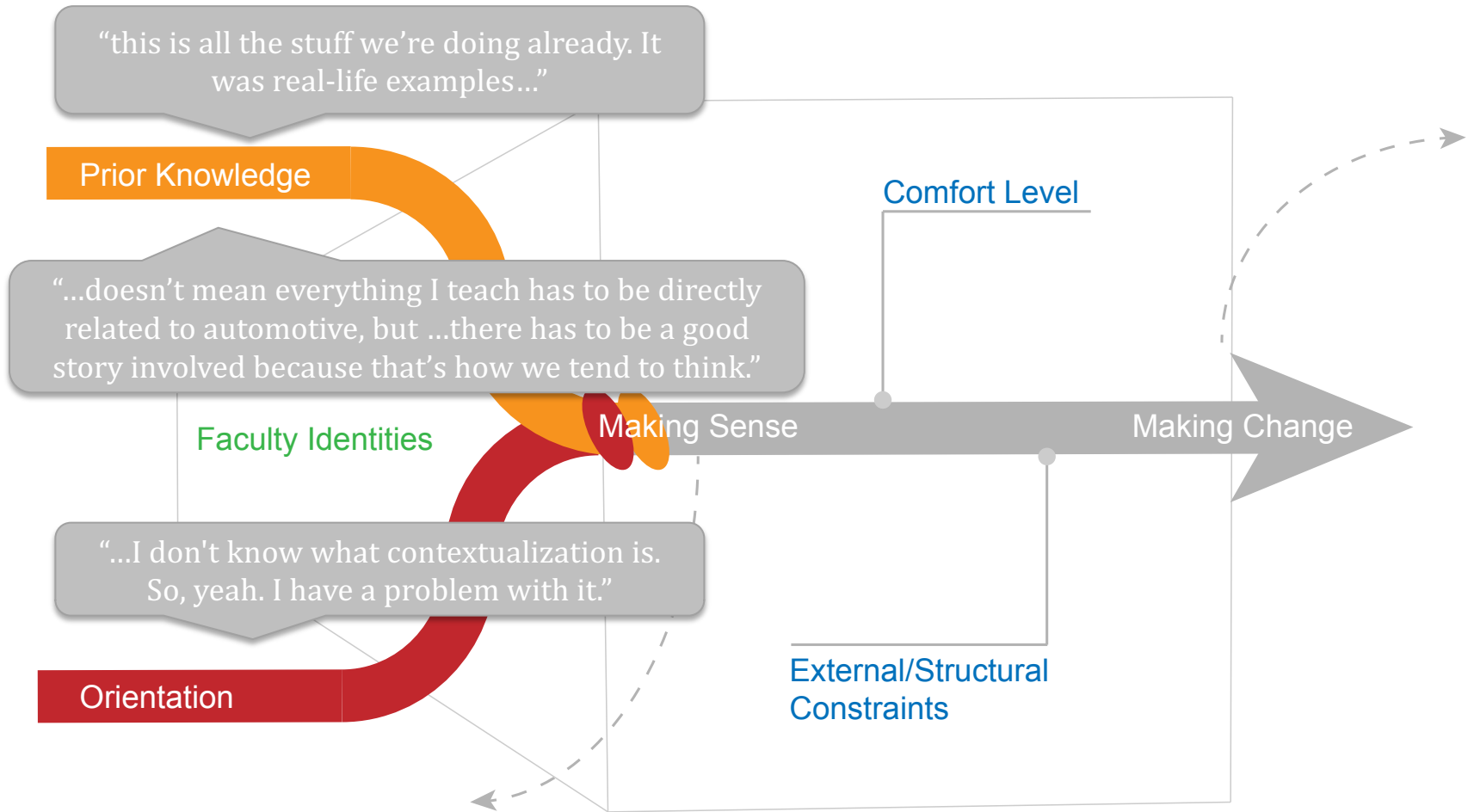
## Faculty Interview Participants (n=32)

	College A PD	%	College A Interview	%	College B PD	%	College B Interview	%
Gender								
Female	11	34.4	4	28.6	14	42.4	9	50.0
Male	21	65.6	10	71.4	19	57.6	9	50.0
Employment Status								
Full-Time	24	75.0	11	78.6	28	84.8	16	88.9
Part-Time	8	25.0	3	21.4	5	15.2	2	15.6
Program Area								
Math	18	56.2	7	50.0	13	39.4	9	50.0
Remedial	6	18.8	2	14.3	6	18.2	2	11.1
Technical	8	25.0	5	35.7	14	42.4	7	38.9
<b>Total</b>	<b>32</b>		<b>14</b>		<b>33</b>		<b>18</b>	

# Findings

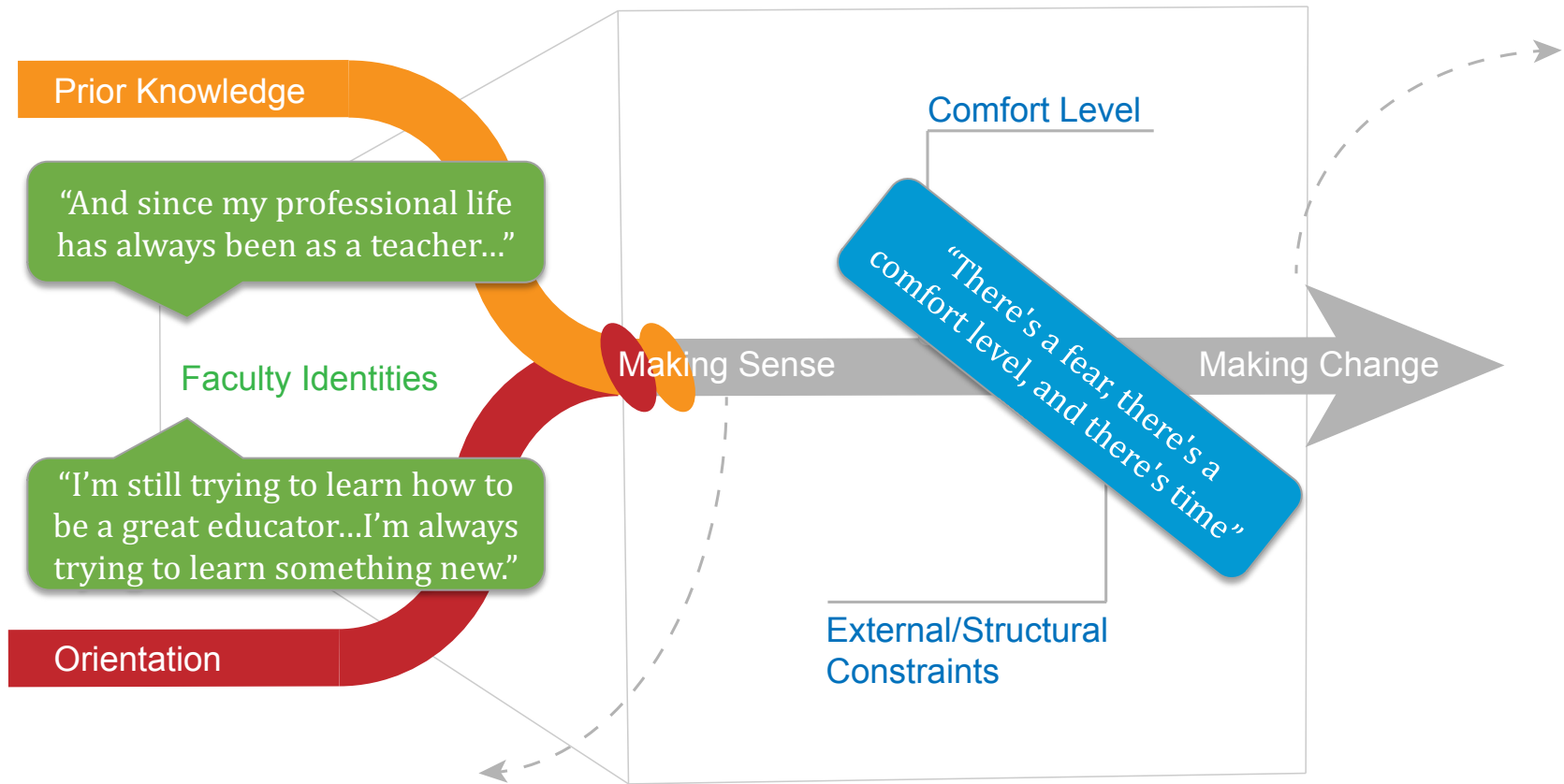


# Findings





# Findings



## Major Takeaways

- Sense-making a complex process of negotiating multiple identities and how they are activated when presented with prior/new knowledge/experiences
- Change at the instructor level driven by
  - comfort level as a result of internal sense-making
  - external constraints shaped by structures and responsibilities



For more information, check out our  
Contextualize to Learn project:  
<https://c2l.wceruw.org/>

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