

Sensemaking Approach to Ethics Instruction: Development and Validation

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Acknowledgements

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Overview

- New federal mandate highlights the importance of effective, validated ethics instruction
- Traditional approaches to ethics lack complexity and empirical evidence
- Sensemaking approach to ethics instruction focuses on decision-making and real-world application
 - Assessment via Ethical Decision-Making Measure

Traditional Approaches to Ethics

- Ethics involve black-and-white, right-wrong issues
- Emphasis on stages of moral development
- Rules and guidelines will promote ethical behavior
- Philosophical, abstract

Meta-analyses of Prior Ethics Course Results

		<i>Md</i>	<i>SD</i>	<i>k</i>	<i>N</i>
Overall Effectiveness		.42	.27	26	3041
Criterion Type	Moral Development	.36	.26	17	2229
	Ethical Analysis	.61	.16	9	812
Program Quality	Below Average	.18	.25	5	674
	Average	.39	.02	8	1301
	Above Average	.72	.15	6	445
Study Quality	Below Average	.16	.23	10	817
	Average	.48	.20	12	1688
	Above Average	.65	.20	4	536
Investigator's Field	Health/Medicine	.38	.17	9	1313
	Philosophy	.54	.21	4	648
	Psychology	.80	.00	6	441
Mandatory Course	No	.53	.25	10	909
	Yes	.32	.23	13	1818
Program Setting	Integrated into Curriculum	.37	.22	11	1832
	Stand-alone Seminar	.51	.30	15	1209

		<i>Md</i>	<i>SD</i>	<i>k</i>	<i>N</i>
Instructional Approach	Decision-Making	.52	.15	9	1234
	Ethical Sensitivity	.42	.11	7	780
	Moral Development	.17	.28	4	619
Type of Skills	Real-World, Global	.64	.11	9	744
	Limited, Domain-Specific	.35	.27	15	2257
Reasoning Errors	No	.33	.17	10	1845
	Yes	.57	.30	9	575
Strategies	No	.22	.25	7	1229
	Yes	.52	.20	13	1245
Ethical Domains	No	-.11	.14	4	460
	Yes	.48	.14	16	2014
Delivery Method	Classroom-Based	.36	.25	8	1091
	Case-Based	.53	.14	9	1214
Learning Activities	3 or more	.12	.34	8	692
	4 or more	.48	.14	13	1995
Participant Interaction	Low	.05	.10	4	411
	Moderate	.37	.16	6	1198
	High	.63	.09	7	722

Pre-Post RCR Evaluation

		Effect Size	Interpretation
Decision-Making Ethicality	Data Management	.17	no effect
	Study Conduct	.05	no effect
	Professional Practices	-0.21	no effect
	Business Practices	-0.37*	negative
Strategies	Anticipating consequences	-0.28	no effect
	Recognizing one's circumstances	.86**	positive
	Questioning one's judgment	.99**	positive
	Dealing with emotions	.38**	positive
	Analyzing personal motivations	.56**	positive
	Seeking help	-1.79**	negative
	Considering others' perspectives	-0.29**	negative
Social-Behavioral Patterns	Involving Others	.19	no effect
	Selfishness	.10	no effect
	Active Involvement	-0.35	no effect
	Avoiding Responsibility	.78**	negative
	Deception	1.53**	negative
	Retaliation	1.16**	negative
	Closed-ended decisions	.59**	negative

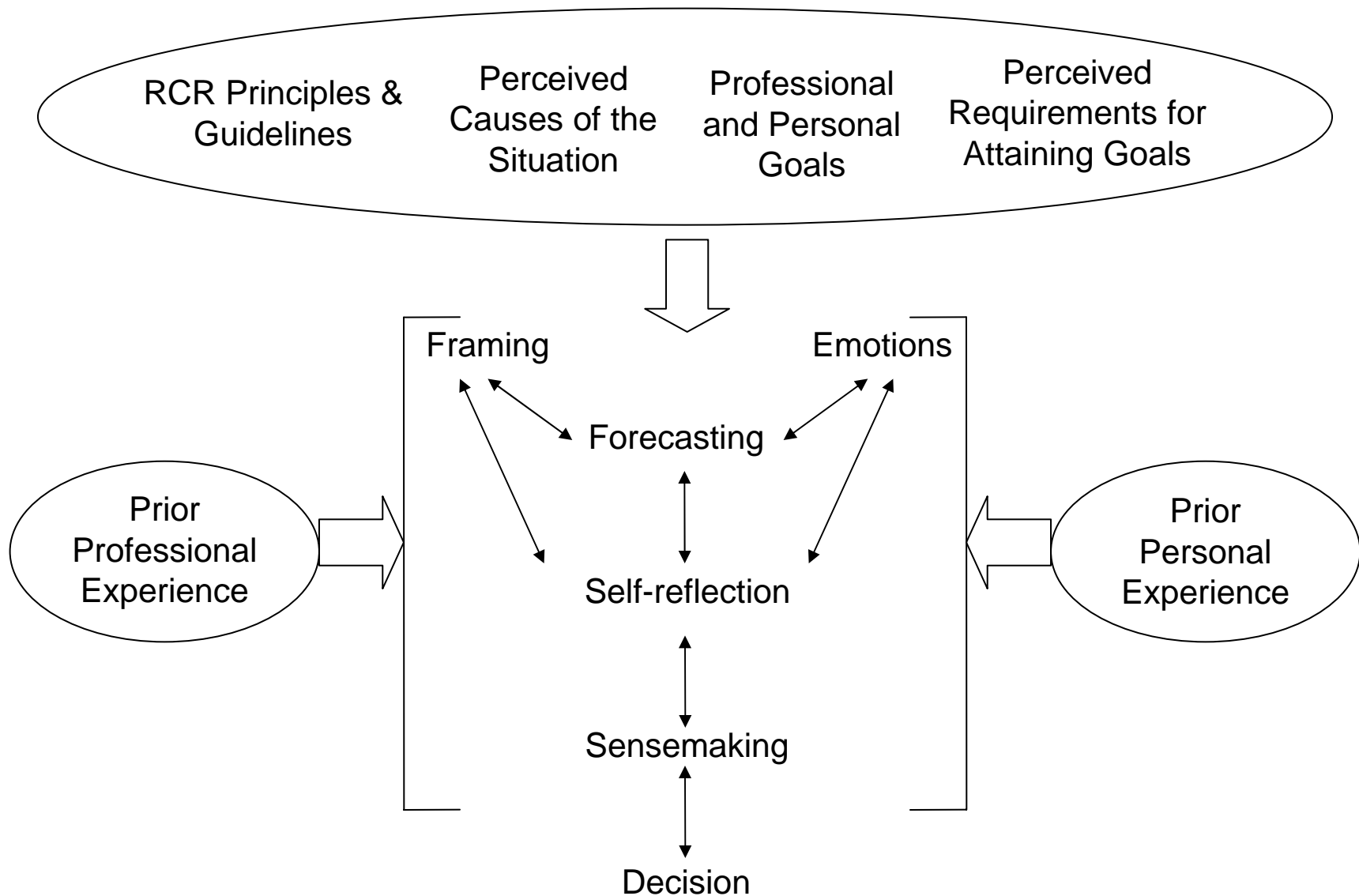
Sensemaking Training Development

- Our Approach to Ethics
 - Complex work problems involving professional, social, and ethical consequences
 - Decision-making strategies, or tools, are needed to promote ethical behavior
 - Rules are not enough; focus on processes
- Background Ethics Research
 - Taxonomy of ethical behavior
 - Theoretical model of ethical decision-making
 - Ethical Decision-Making Measure

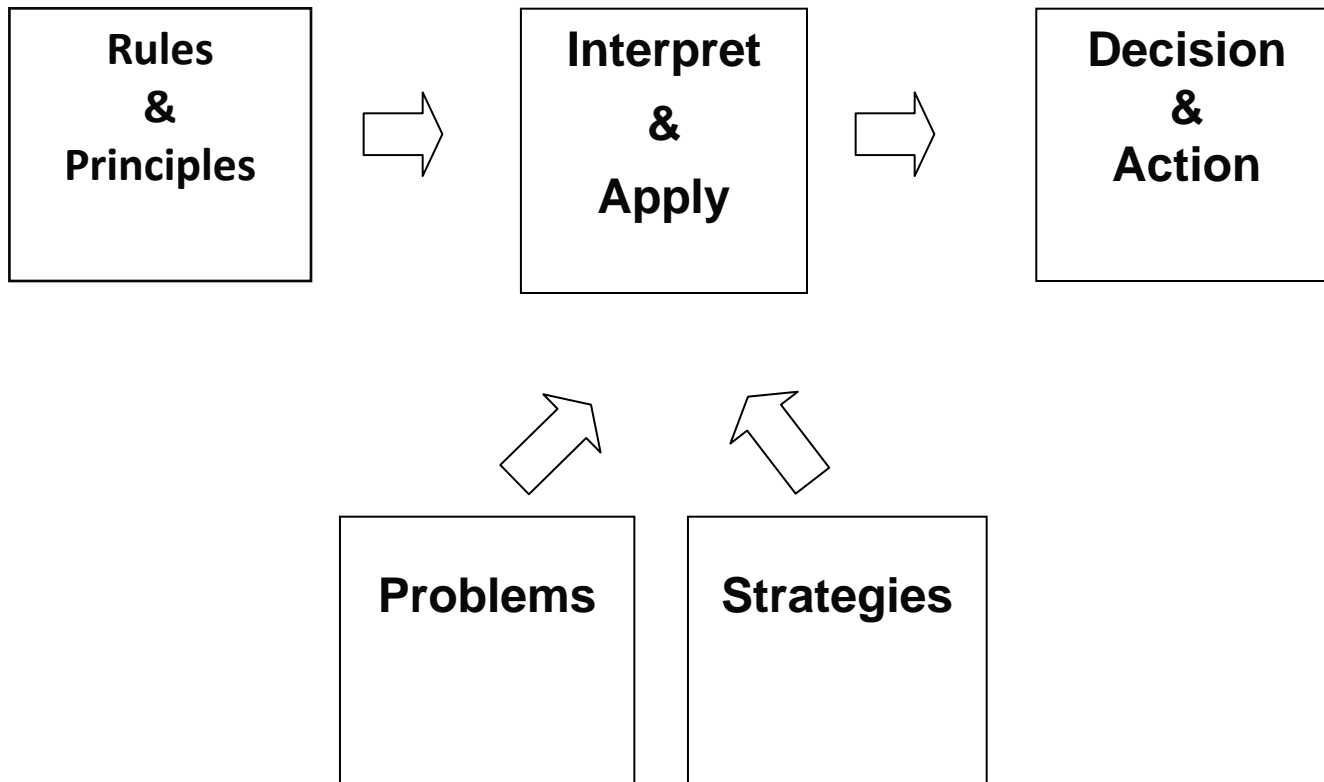
Conceptual Basis for Sensemaking Training

- Decision-making strategies facilitate EDM
- Decision-making errors and personal biases hinder EDM
- Decisions involve social-emotional considerations and implications
- Case-based reasoning facilitates development of knowledge to serve as foundation
- Cooperative learning fosters social awareness and social reinforcement

Sensemaking Model



Ethical Decision-Making Model



EDM Measure Development

- SMEs generate field-specific ethical examples
 - Real-world, ambiguous examples
- Equal representation of EDM items across ethical behavior taxonomy
- Parallel forms of measure for pre-post format
- “Pick two” scoring scheme
- Code response options for:
 - Ethicality of Response
 - Strategy underlying response

Example EDM Measure Item

(Social Science)

Dr. Cedar, a young developmental psychologist, obtained an Early Career Research Grant from the National Institute of Child Health and Human Development to study aggression in elementary school children. Cedar suspects that some children with a certain genetic makeup will be especially susceptible to the effects of television violence. Part of the project requires obtaining a cheek swab for DNA analysis, but interviewing and observing children in the classroom constitutes the major effort. Cedar is collaborating with a well-known senior social psychologist, Dr. Dawson. Given the geographic distance between their universities, the labs communicate primarily via email.

1. Considering the sensitive nature of the project, Cedar is concerned that parents will be reluctant to allow their children to participate. He is writing the informed consent form and worries that too much detail might discourage participation. How should Cedar handle this issue? Choose **two** from the following:
 - a) Use wording like that of a past study involving similar procedures.
 - b) Offer parents the option to contact participants from past data collection efforts to alleviate their concerns.
 - c) Contact parents via phone to explain the importance of granting permission for their child's participation.
 - d) Send a follow up letter to non-consenting parents explaining that the risks are minimal.
 - e) Mention the minor potential risks in the informed consent along with the benefits of the research.
 - f) Describe all possible risks in the informed consent form, no matter how trivial.
 - g) Send a handout along with the informed consent form addressing parents' common questions and concerns.
 - h) Since the risks of the study are trivial, deemphasize them in the informed consent form.

EDM Measure Validation

- Measure administered to 102 graduate students
- Performance on EDM measure related to:
 - Exposure to ethical events ($r = .02$ to $-.52$)
 - Narcissism & Cynicism ($r = -.01$ to $-.29$)
 - Meta-cognitive reasoning strategies
($r = .12$ to $.52$)
 - Anti-social behaviors ($r = -.07$ to $-.52$)

Sensemaking Training Overview

- Two-day seminar (16 hours of instruction)
- 10 modules
 - 2 out-of-class modules
 - 8 in-class modules
- Key Instructional Objectives
 - Develop understanding of the ambiguous, complex nature of problems that may be encountered in professional work
 - Learn strategies that facilitate identification, analysis, and acting within ethical situations

Sensemaking Training Content

- Knowledge of guidelines
- Awareness of own biases and common errors
- Model of ethical decision-making (EDM)
- Situational analysis and interpretation
- Strategies, or tools, for decision-making
- Field differences
- Topics covered
 - Mentor-mentee relationships, collaboration, interdisciplinary research, management practices, whistleblowing, handling data, publication practices, conflict of interest, authorship

Decision-Making Strategies

Tools for Making Ethical Decisions

1. Recognizing Your Circumstances
2. Seeking Outside Help
3. Questioning Your Judgment
4. Dealing with Your Emotions
5. Anticipating Consequences
6. Analyzing Personal Motivations
7. Considering Others' Perspectives

Sensemaking Training Activities

- Interactive activities throughout
- Small and large group discussions
- Complex, realistic case studies
- Generation activities
- Role-plays

Sensemaking Training Validation

- Social & biological sciences graduate student sample
- Engineering graduate student and professional sample
- Pre-post ethical decision-making test
 - Outcomes examined for pre-post changes
 - Ethicality of decisions
 - Strategy use

Sensemaking Training Validation

	<u>Effect Size (Cohen's <i>d</i>)</u>		
	Scientist Sample	Engineer Sample	Undergrad Sample
Decision-Making Ethicality			
Data Management	.66**	.53*	1.79**
Study Conduct	1.46**	.66*	.34
Professional Practices	.61**	1.06**	1.68**
Business Practices	.49*	1.82**	1.09**
Strategies			
Recognizing one's circumstances	1.24**	.16	.35
Seeking help	.84**	-0.65*	-0.01
Questioning one's judgment	1.27**	1.92**	2.45**
Dealing with emotions	.90**	1.51**	2.56**
Anticipating consequences	.77**	.33	.79**
Analyzing personal motivations	1.36**	.60*	1.05**
Considering others' perspectives	.45**	.08	.27

Sensemaking Training Validation

- Effects held over 6-month follow-up period
- Training changed mental models
 - Trained individuals
 - Mental representations of ethical problems characterized by in-depth analysis of the ethical situation
 - Untrained individuals
 - Focus solely on outcomes and neglect analysis