

# *Beliefs about Intelligence & Knowledge*

## *Implicit Beliefs & Education*

- Implicit beliefs are unconscious, personal beliefs about the world
- Implicit theories are tacit assumptions about how some phenomenon works
- Everyone has implicit belief systems
- Implicit beliefs about such topics as intelligence, knowledge, hope, and reading play a profound role in academic settings
- These theories are many times difficult to state explicitly

## Types of Implicit Beliefs

- Intelligence
- Moral Judgment
- Knowledge
- Hope
- Reading

## Goal Orientations

**Entity Theorists** → **Performance Goals**

Normative

Prove competence

Grades

Comparison

Others' perceptions

Gaining Recognition

# Goal Orientations

**Incremental Theorists** → **Learning or Mastery Goals**

Knowledge acquisition

Progress

Competency

Self-improvement

## *Implicit Beliefs about Intelligence*

- **Learning goals** lead to greater persistence, more varied strategy use, appropriate help-seeking and are more likely to have high self-efficacy and attribute success to controllable factors such as effort and strategy use
- **Performance goals** lead to attempting easy rather than challenging problems, a defensive attitude regarding ability, and a greater frequency of developing learned helplessness because of fear of failure

## *Fostering Adaptive Goals*

- Promote the view that intellectual development is controllable
- Reward effort and improvement while de-emphasizing innate ability
- Emphasize the process, rather than the products, of learning
- Stress that mistakes are a normal (and healthy) part of learning
- Encourage individual, rather than group, evaluative standards

**“Perhaps the most appropriate view represents an integration of both entity and incremental theories, that is, a recognition of present differences in relative ability but an emphasis on individual growth in ability.”**

*Dweck & Leggett, 1988*

## More Recent Conceptions . . .

- **Mastery Approach** - for attaining task-based or intrapersonal competence
- **Mastery Avoid** - for avoiding task-based or intrapersonal incompetence
- **Performance Approach** - for attaining normative competence
- **Performance Avoid** - for avoiding normative incompetence

1            2            3            4            5            6            7  
 not            slightly            moderately            very            extremely  
 true of me            true of me            true of me            true of me            true of me

### Task-approach goal items

To get a lot of questions right on the exams in this class.  
 To know the right answers to the questions on the exams in this class.  
 To answer a lot of questions correctly on the exams in this class.

### Task-avoidance goal items

To avoid incorrect answers on the exams in this class.  
 To avoid getting a lot of questions wrong on the exams in this class.  
 To avoid missing a lot of questions on the exams in this class.

### Self-approach goal items

To perform better on the exams in this class than I have done in the past on these types of exams.  
 To do well on the exams in this class relative to how well I have done in the past on such exams.  
 To do better on the exams in this class than I typically do in this type of situation.

### Self-avoidance goal items

To avoid doing worse on the exams in this class than I normally do on these types of exams.  
 To avoid performing poorly on the exams in this class compared to my typical level of performance.  
 To avoid doing worse on the exams in this class than I have done on prior exams of this type.

### Other-approach goal items

To outperform other students on the exams in this class.  
 To do well compared to others in the class on the exams.  
 To do better than my classmates on the exams in this class.

### Other-avoidance goal items

To avoid doing worse than other students on the exams in this class.  
 To avoid doing poorly in comparison to others on the exams in this class.  
 To avoid performing poorly relative to my fellow students on the exams in this class.

Elliot, Murayama, & Pekrun (2011). *Journal of Educational Psychology*

## *Implicit Beliefs about Knowledge*

- Epistemological beliefs refer to beliefs about the nature of knowledge
- Schommer argues that epistemological beliefs have four dimensions
  - Simple knowledge
  - Certain knowledge
  - Fixed ability
  - Quick learning
- A major overall finding is that beliefs about knowledge are significantly related to level of education

## Beliefs About Knowledge

1. **Certain knowledge** – absolute knowledge exists and will eventually be known
2. **Simple knowledge** – knowledge consists of discrete facts
3. **Quick learning** – learning occurs in a quick or not-at-all fashion
4. **Fixed ability** – the ability to acquire knowledge is static

## Questions regarding implicit beliefs about knowledge

- Why might you imagine that Schommer found that education majors more readily ascribe to certain knowledge than science majors?
- Studies have found that pre-service teachers leave their teacher-training programs with many of the same beliefs that they entered with. What implications does this have for teacher education programs and beliefs in general?

## Stages of Reflective Judgment

- **Stage 1:** Knowledge is unchanging, absolute, & accessible
- **Stage 2:** Knowledge is certain but may not be accessible to everyone
- **Stage 3:** Knowledge is certain, though it may be accessible to anyone
- **Stage 4:** Knowledge is uncertain and idiosyncratic
- **Stage 5:** Knowledge is uncertain, though contextually interpretable
- **Stage 6:** Knowledge is relative yet justifiable on the basis of rational arguments
- **Stage 7:** Knowledge is relative, though some interpretations have greater truth

## **Reflective Judgment**

- **Reflective judgment is concerned with the way people resolve dilemmas**
- **Reflective judgment develops gradually in a sequential manner and is related to critical thinking. Two primary mechanisms for change are experience and belief systems**

## **Recommendations**

- **Make beliefs explicit**
- **Confront inconsistencies**
- **Provide opportunity to weigh conflicting evidence**

## Hope

- Hope as defined as agency and pathways-- the "**will**" and the "**ways**." The former refers to self-determination and perseverance when faced with challenges. The latter refers to how well an individual can generate workable solutions to those challenges
- High hope leads to persistence, a preference for difficult tasks not explained by general ability, and appears to be rather stable over time

## Transactional Reading is ...

- construction of meaning from text. It is an active, cognitive, and affective process.
- Readers actively interact with text
- Readers view text experiences as being 2-way
- A transmission approach emphasizes reading to gain information

## *Implicit Beliefs about Reading*

- **Transmissional beliefs** are based on the assumption that meaning is transmitted directly from the author to the reader. This model views the reader as a passive receiver whose primary objective is to extract the author's intended meaning, rather than an active maker of meaning
- **Transactional beliefs** are based on the assumption a text means different things to different readers regardless of what the author intended or what the text contains (Carey & Harste, 1987; Farrell & Squire, 1990)

## ***Self-Regulated Learning***

*The ability to control all aspects of one's learning, from advance planning to how one evaluates performance afterward*

### **3 Core Components**

- **Metacognitive awareness**
  - Knowledge about cognition/Regulation of cognition
- **Strategy use**
  - Selectively choosing then evaluating strategies
- **Motivational control**
  - Goals, self-efficacy, effort