

Minding the Message: Student Perceptions of Instructor Mindset Communication

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Purpose

The purpose of these studies is to measure instructors' communication of fixed and growth mindsets, through the messages they use, as a component of classroom context in a required undergraduate communication class.

Theoretical Framework

- A growth mindset improves outcomes for learners across ages, domains, and settings (Dweck & Molden, 2017).
- Growth mindset has been shown to reduce anxiety in undergraduate communication courses (Nordin & Broeckleman-Post, 2019).
- At the college level, the messages instructors use within the classroom (Barger, 2018) may be particularly salient to student mindset.

Sample & Measures

Two studies were conducted in a required fundamentals of communication course at a large mid-Atlantic university. We explored potential correlations between student perceptions of teacher mindset messages with students' personal mindset, classroom goal structure, and autonomy support beliefs to establish validity.

Study 1

Participants

The sample included 175 undergraduate students (43% female; 39% white/Caucasian; 26% Asian; 11% Multiracial; 11% Hispanic/Latinx; 9% African American; other race/ethnicities were less than 9%; 26% engineering; 14% humanities and social sciences; other majors were less than 10%).

Measures

Mindset Messages. With input from communication instructors, we developed instructor mindset message items that reflected either a growth or fixed mindset about ability in communication (Table 1). Participants indicated how frequently they hear these (or similar) messages from their communication instructors.

Classroom context. Well-established classroom context scales assessed classroom goal structures (PALS; Midgely et al., 2000; mastery: 6 items, performance-approach: 5 items, performance-avoidance: 3 items) and perceptions of autonomy support (Learning Climate Questionnaire; Williams & Deci, 1996; 5 items).

Student mindsets. Eight items were adapted from Dweck's (2000) Theories of Intelligence Scale (TIS). Higher scores on the TIS indicate growth mindset (Nordin & Broeckleman-Post, 2019). Both studies used the same items. All responses were measured on a 5-point Likert scale except autonomy support which used a 7-point scale.

Study 2

Participants

The sample included 1,399 undergraduate students (50% female; 36% white/Caucasian; 24.4% Asian; 11% Black/African American; 10.6% Hispanic/Latinx; other race/ethnicities were less than 10%; 26.2% engineering; 21.8% humanities and social sciences; 14.9% science; 13.8% business; other majors were less than 10%).

Measures

We replicated the same procedures and items were clarified based on student input and researcher observation (Table 3). Classroom context and student mindset measures were the same as Study 1 (Table 4).

Results

Table 1

Study 1 Exploratory Factor Analysis Using Primary Components Analysis with Varimax Rotation

| Questionnaire item | Growth Mindset | Fixed Mindset |
|--|----------------|---------------|
| Everybody can learn communication skills with practice. | .71 | .10 |
| With a little hard work, you can get better at this. | .66 | .21 |
| It's okay to make mistakes. | .78 | .23 |
| It's okay if your first attempts are not perfect. | .77 | .19 |
| It's okay if you are not perfect at this. | .83 | .28 |
| With practice, anyone can communicate successfully. | .75 | .16 |
| Everyone can learn strategies to have good conversations. | .72 | .24 |
| Some people are better at this than others. | .08 | .84 |
| Some people are just more gifted at this than others. | .13 | .82 |
| Some people can naturally adapt to new communication styles. | .42 | .66 |
| Some people have a talent for understanding others. | .26 | .73 |
| Some people are just good at communication. | .29 | .78 |
| Total variance extracted 62.34% | | |

- In both studies, two factors were extracted from student perceptions of teacher messages. In the first, seven items loaded on a growth mindset factor, while in the second study six items emerged for growth mindset. Fixed mindset had five items in Study 1 and seven in Study 2.
- Communalities were all above .49 in both studies, and most items at .60 or above. All primary factor loadings were $\geq .66$ in Study 1 and $\geq .69$ in Study 2.
- Instructor messages of fixed mindset correlated positively with perceived performance-avoid goal structure in both studies with weak correlations in Study 1 and moderate correlations in Study 2.
- Instructor messages of growth mindset correlated positively on both studies with personal mindset, mastery goal structure, and autonomy support.

Table 2

Study 1 Descriptive Statistics

| Variable | α | M | SD | 1 | 2 | 3 | 4 | 5 | 6 |
|-------------------------------|----------|------|------|-------|-------|-------|-------|-------|-------|
| Fixed messages | .80 | 2.57 | .99 | | | | | | |
| Growth messages | .87 | 3.83 | .84 | .53** | | | | | |
| Personal mindset | .83 | 3.34 | .78 | .09 | .17** | | | | |
| Mastery goal structure | .80 | 4.20 | .57 | .09 | .45** | .11 | | | |
| Perf. approach goal structure | .82 | 3.82 | .78 | .03 | -.04 | -.06 | .14 | | |
| Perf. avoid goal structure | .73 | 2.82 | .86 | .18* | -.04 | -.17* | -.10 | .39** | |
| Autonomy support | .84 | 4.06 | .67 | .12 | .48** | .03 | .64** | -.07 | -.19* |

* $p < .05$. ** $p < .01$.

Table 3

Study 2 Exploratory Factor Analysis Using Primary Components Analysis with Promax Rotation

| Questionnaire item | Fixed Mindset | Growth Mindset |
|---|---------------|----------------|
| You only have so much talent for understanding others | .86 | -.16 |
| Good communication skills are a gift. | .82 | -.05 |
| Some people are just good at communication. | .81 | .04 |
| Some people are better at this than others. | .77 | .03 |
| Even with practice you can only improve so much. | .72 | -.07 |
| Communication comes naturally to some people. | .71 | .19 |
| You seem to have a talent for communicating. | .69 | .09 |
| With practice anyone can communicate successfully. | -.04 | .84 |
| Everybody can learn communication skills with practice. | -.08 | .84 |
| Don't worry if your first attempts are not perfect. | .01 | .83 |
| Mistakes are part of the process of learning. | .02 | .81 |
| It's okay if you are not perfect at this. | -.01 | .81 |
| Everyone can learn strategies to have good conversations. | .09 | .75 |
| Total variance extracted 63.18% | | |

Table 4

Study 2 Descriptive Statistics

| Variable | α | M | SD | 1 | 2 | 3 | 4 | 5 | 6 |
|-------------------------------|----------|------|------|-------|--------|-------|--------|-------|--------|
| Fixed messages | .89 | 2.40 | 1.02 | | | | | | |
| Growth messages | .90 | 3.83 | .93 | .32** | | | | | |
| Personal mindset | .86 | 4.17 | .68 | .27** | .12** | | | | |
| Mastery goal structure | .88 | 4.15 | .77 | .05 | .55** | .16** | | | |
| Perf. approach goal structure | .73 | 3.52 | .88 | .26** | .06* | .24** | .20** | | |
| Perf. avoid goal structure | .87 | 2.81 | .98 | .40** | -.09** | .29** | -.08** | .58** | |
| Autonomy support | .95 | 5.49 | 1.24 | .13** | .54** | .18** | .72** | .09** | -.09** |

* $p < .05$. ** $p < .01$.

Discussion

- Two factor structure aligns with prior research on implicit theories in general (Dweck, 1999) and domain-specific coursework (Nordin & Broeckleman-Post, 2019).
- The use of teacher messages offers a novel approach to study implicit theories and the two-factor structure was replicated across two studies and correlated with other classroom context variables as expected.
- Prior literature (Dweck & Molden, 2017) connected implicit beliefs to other psychological and motivation constructs, our findings lend insight to how student perceptions of instructor mindset messages relate to students' personal mindsets, goal structures, and perceptions of autonomy support.
- Further research is needed to determine the effect of initial student mindsets on student reporting of instructor messages (Barger, 2018), the impact of teacher mindset messages on student mindsets, goal structures and perceptions of autonomy support, and to explore the relationship between teacher mindset messages and student engagement and/or achievement.