EMANATE

EMANATE - EDUCATIONAL
SESSIONS HIGHLIGHTS
EESH

https://www.emanate.education/

e-ISSN: 3062-1615

DOI: 10.70020/eesh.2026.05.3

ICEEPSY 2025
16th International Conference on Education and Educational Psychology

LEARNER MINDSET MEANING SYSTEMS IN JAPANESE HIGHER EDUCATION: A QUALITATIVE STUDY

Jason D. Gold (a)*
*Corresponding author

(a) Sagami Women's University, 2 Chome-1-1 Bunkyo, Minami Ward, Sagamihara, Kanagawa 252-0383 Japan, jasongold526@gmail.com

Abstract

High-stakes, test-driven education can discourage academic engagement by promoting fixed views of intelligence. This study explored Japanese university students' learner mindset meaning systems (LMMS) to understand how they shape beliefs about intelligence, effort, mistakes, and failure. Conducted as a longitudinal qualitative case study within a 16-week English for Academic Purposes course at a top national university, the research used weekly reflections and post-course interviews to examine students' interpretations of academic experiences. Template analysis revealed clear differences: growth mindset–oriented students interpreted challenges as opportunities for improvement, responded to failure with reflection and persistence, and demonstrated increasing resilience. In contrast, fixed mindset–oriented students linked setbacks to personal inadequacy and were more likely to avoid risk due to fear of judgment. Students' LMMS were shaped by multiple sociocultural influences, including parents, teachers, peers, media, and cram school environments. These belief systems strongly influenced motivation, emotional responses, and academic behavior. The findings suggest that fixed views of intelligence in high-pressure academic contexts can undermine confidence, increase performance anxiety, and reduce student engagement. In contrast, supportive learning environments that normalize struggle and value effort can encourage more adaptive learning behaviors. This study contributes to understanding how mindset beliefs operate in a non-Western context and highlights the need for classroom practices and institutional cultures that support the development of growth-oriented mindsets.

Keywords: Learner mindset, growth mindset, university, Japan

https://doi.org/10.70020/eesh.2026.05.3
Corresponding Author: Jason D. Gold
Selection and peer-review under responsibility of the Organizing Committee of the conference
e-ISSN: 3062-1615

1. Introduction

A primary goal of institutional education is to facilitate students' learning and prepare them for academic and future success (Dweck et al., 2014; Farrington et al., 2012). Yet in recent years, educators and stakeholders have voiced growing concern that students are not being adequately equipped with both the academic capabilities and dispositions that support motivation and resilience needed for long-term learning in a rapidly evolving world (Lucas & Spencer, 2018). Echoing these concerns, colleges and employers continue to report that incoming students "are woefully underprepared for what is needed of them to be successful" (Martin, 2021, p. 54).

Historically, educational systems have emphasized cognitive skill development, especially as measured by intelligence tests and academic performance, forming the basis of policy worldwide (Datu et al., 2016; Wanzer et al., 2019). These policies often focus on raising academic standards through rigorous curricula and standardized assessments—such as high-stakes tests—and rely on performance indicators like grade point average (GPA) to predict students' academic and future success (American Educational Research Association et al., 2014; Farrington et al., 2012).

Underlying these practices is the belief that content mastery signifies readiness for higher education and career success. As a result, standardized testing has become a central feature of institutional education, shaping school curricula and influencing the skills teachers prioritize and students are expected to acquire (Watson, 2019). With accountability policies in place, instructors often feel pressured to "teach to the test," leading to an overemphasis on rote memorization and performance comparisons among students (Haimovitz & Dweck, 2017).

However, researchers have increasingly questioned the assumptions underlying these policies, arguing they promote a narrow and misguided view of which academic and social competencies should be valued (Datu et al., 2016; Dweck et al., 2014). Recent U.S. data reveal a troubling decline in students' motivation, engagement, and attitudes toward learning (Dweck & Yeager, 2019), with many feeling "disengaged, stressed, depressed, and burned out" (Martin, 2021, p. 53). One contributing factor is that students begin to equate academic results not as a reflection of their current level, but as evidence of fixed, lifelong intelligence/ability (Haimovitz & Dweck, 2017).

A consequence of this fixed view is that students who struggle academically often become discouraged, gradually losing confidence and disengaging from the learning process (Martin, 2021). This can lead to lower performance, as unmotivated students tend to study less, underperform, and avoid challenging coursework—creating a vicious self-reinforcing cycle (Yeager et al., 2014). Left unaddressed, this pattern can compound over time, resulting in "a serious loss of human potential" (Dweck et al., 2014, p. 2), with lasting consequences for students' academic and life outcomes. Because meaningful learning depends on a belief in growth through effort, educational policies that emphasize fixed outcomes over development may ultimately hinder student success (Haimovitz & Dweck, 2017).

Academic achievement is multifaceted and cannot be explained by cognitive ability alone, as students often respond differently to similar academic challenges, even in standardized settings (Lucas & Spencer, 2018). These differences highlight a key factor often overlooked in policy and curricula: students' mindset toward learning (Limeri et al., 2020). Research increasingly shows that mindsets play an equally—if not more—important role in academic success (American Educational Research Association et al., 2014;

https://doi.org/10.70020/eesh.2026.05.3
Corresponding Author: Jason D. Gold
Selection and peer-review under responsibility of the Organizing Committee of the conference
e-ISSN: 3062-1615

Weissberg et al., 2015), and that fostering positive mindset development can improve educational outcomes (e.g., Dweck et al., 2014; Farruggia et al., 2018). Thus, student success requires more than content mastery or high test scores; students also must be equipped with the mindsets needed to navigate and overcome the diverse academic and real-world challenges they will encounter (Bernardo et al., 2016; Lucas & Spencer, 2018).

Students' mindset beliefs—specifically whether they view intelligence as fixed or improvable—shape their motivation, learning behavior, and persistence (e.g., Dweck, 2017; Haimovitz & Dweck, 2017). These beliefs form broader meaning systems that influence how students interpret effort, setbacks, and failure. Yet despite their impact on student outcomes, mindset development remains largely overlooked in mainstream educational policy and practice. Furthermore, while decades of research support the influence of mindset beliefs on academic behavior and performance, most studies have focused on WEIRD (Western, Educated, Industrialized, Rich, Democratic) populations, with limited exploration of how these beliefs manifest and operate in other cultural contexts—particularly East Asia—where differing sociocultural norms may shape students' thinking in important ways.

This qualitative study addresses this gap by investigating how Japanese university students interpret their academic experiences through the lens of fixed and growth mindset beliefs. Situated in a high-level English for Academic Purposes (EAP) course, it examines how students' beliefs about intelligence, effort, mistakes, and failure are shaped by personal experience and sociocultural context—and how these beliefs influence their academic motivation, engagement, and identity. Drawing on students' reflections and lived experiences, this study deepens understanding of how learner mindset meaning systems manifest and operate in a non-WEIRD cultural setting.

2. Literature Review

A growing body of research in psychology and education—led by Carol Dweck and others—has shown that students' academic motivation, persistence, and achievement are strongly shaped by their beliefs about learning, often referred to as learner mindsets (e.g., Dweck, 2017; Haimovitz & Dweck, 2017). Rooted in the cognitive perspective, this concept emphasizes that learning and development occur primarily within the individual through changes in thinking, knowledge, and skills.

Dweck's research showed that students' beliefs about the malleability of intelligence and ability influence their motivation and learning behaviors. Students with a fixed mindset view intelligence as an innate and unchangeable trait—something one either has or does not. Success confirms natural ability, while failure signals a lack of it. Because they see effort as unlikely to change outcomes, hard work may even be perceived as evidence that they lack ability. In contrast, students with a growth mindset believe intelligence/ability can always be developed through effort, effective strategies, and learning from mistakes.

These beliefs shape how students respond to academic challenges: while a dominant GM-orientation fosters persistence, adaptability, and a willingness to learn from failure, a dominant FM-orientation often leads students to avoid difficulty and give up easily—especially when they fear failure reflects their innate ability. Over time, these patterns can lead to significantly different academic outcomes, even among students with similar potential (e.g., Dweck & Yeager, 2019; Yeager & Dweck, 2020).

https://doi.org/10.70020/eesh.2026.05.3
Corresponding Author: Jason D. Gold
Selection and peer-review under responsibility of the Organizing Committee of the conference
e-ISSN: 3062-1615

2.1. Fixed and growth learner mindset meaning systems

Students' beliefs about learning are shaped by an interrelated set of factors, including how they attribute success and failure (e.g., to effort or innate ability; Smiley et al., 2016; Yeager & Dweck, 2020), how they view effort (productive or pointless; Dweck et al., 2014; Yeager & Dweck, 2012), the types of goals they pursue (mastery vs. performance; Dweck, 2017; Yeager & Dweck, 2020), and their emotional and behavioral responses to challenges (mastery-oriented vs. helpless; Cury et al., 2006; Limeri et al., 2020).

Together, these beliefs make up a distinct learner mindset meaning system (LMMS), which guides how students interpret their abilities and respond emotionally and behaviorally to academic challenges. These systems exist along a continuum, with fixed and growth mindsets at opposite ends and blended beliefs in between (Dweck & Yeager, 2019; Lou & Noels, 2019; see Figure 1).

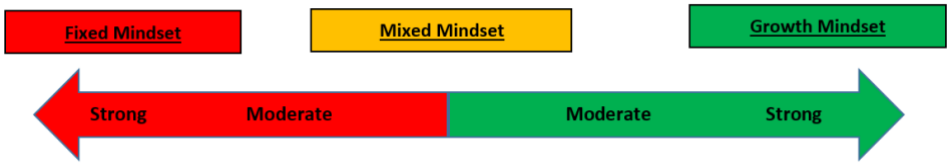

Figure 1. Learner Mindset Meaning System Continuum

Building on these distinctions, LMMSs offer a useful lens for understanding students' varied responses to similar academic challenges, as they shape how students interpret effort, feedback, and setbacks, ultimately influencing motivation, goals, and achievement (e.g., Lou & Noels, 2019; Yeager & Dweck, 2020; see Figure 2).

Dimension	Fixed Mindset Meaning System	Growth Mindset Meaning System
Intelligence/Ability Beliefs	Intelligence/ability is fixed and innate	Intelligence/ability can be developed through effort and strategy
Effort Beliefs	Effort is a sign of low ability and unlikely to improve outcomes	Effort is essential for growth and learning
Goal Orientation	Performance or avoidance goals; focus on proving ability or avoiding failure	Mastery goals; focus on improving skills and understanding
Response to Setbacks	Avoids challenges; sees failure as proof of low ability	Embraces challenges; sees failure as an opportunity to learn/grow
Response to Feedback/Criticism	Dismisses or avoids feedback; sees it as threatening to self-image	Uses feedback constructively; sees it as helpful information for improvement
Self-Regulation	Defensive strategies (e.g., avoidance, downward comparisons); lower persistence	Adaptive strategies (e.g., help-seeking, effort adjustment); higher persistence
Emotional Resilience	Easily discouraged; anxious about appearing "not smart"	Emotionally resilient; views struggle as part of the learning process

Figure 2. Fixed and Growth Mindset Meaning Systems

Despite decades of neuroscience research demonstrating the brain's lifelong malleability (e.g., Dubinsky, 2010; Faulkner et al., 2008), many students still mistakenly believe intelligence is largely determined by genetics and that effort cannot meaningfully improve their academic potential (Willis, 2010).

https://doi.org/10.70020/eesh.2026.05.3
Corresponding Author: Jason D. Gold
Selection and peer-review under responsibility of the Organizing Committee of the conference
e-ISSN: 3062-1615

This misconception reinforces a FM meaning system, which views intelligence and ability as innate and unchangeable traits. Students with a strong FM often attribute success to being naturally "smart" and interpret failure as a reflection of inherent inadequacy. Within this belief system, effort is frequently seen as a sign of low ability—something required only by those who lack talent—and is therefore viewed as largely ineffective (Dweck et al., 2014; Yeager & Dweck, 2020). This can trigger a cascade of limiting beliefs and behaviors that ultimately undermine academic performance.

These students typically pursue performance or avoidance goals—aiming to validate their ability or avoid situations where they might fail or appear incompetent (Yeager & Dweck, 2020). As a result, they become preoccupied with how others perceive them, often prioritizing the appearance of competence over actual growth. This self-validation motive can heighten anxiety, particularly in high-pressure settings where the risk of negative evaluation is high (Dweck, 2017; Robins & Pals, 2002). Because failure is seen as a reflection of who they are—not just what they did—FM-oriented students are especially fragile in the face of setbacks. They may reject constructive feedback, avoid effort to protect their self-esteem, or compare themselves to less capable peers to preserve a sense of competence (e.g., Nussbaum & Dweck, 2008). Over time, repeated setbacks can reinforce the belief that success is beyond their control, leading to reduced motivation, learned helplessness, and eventual disengagement from learning (Dweck, 2017; Dweck & Yeager, 2019).

In contrast, students with a GM-orientation view intelligence and ability as qualities that can be developed through effort, strategy, and learning over time. As such, their meaning system includes effort-as-positive beliefs, a tendency to attribute outcomes to controllable factors like persistence and study habits, and a preference for mastery goals over performance comparisons (Lou & Noels, 2019; Yeager & Dweck, 2020). Rather than focusing on performance or avoiding failure, they prioritize developing competence and understanding through sustained effort and reflection.

These students often embrace and even enjoy challenging tasks, seeing them as essential for growth and self-improvement (e.g., Dweck, 2017), and are more likely to believe in what Blackwell et al. (2007) called “the utility of effort versus the futility of effort given difficulty or low ability” (p. 247). Setbacks are not seen as threats to self-worth but instead as constructive feedback that offer valuable insights for improvement (e.g., Robins & Pals, 2002). This mindset also fosters emotional resilience and sustained motivation, encouraging students to adjust strategies, seek support, and invest continued effort over time (Blackwell et al., 2007; Dweck & Yeager, 2019). Even when success is not immediate, they remain engaged, guided by the belief that meaningful progress comes through overcoming difficulty.

In short, FM and GM beliefs form distinct meaning systems that shape how students interpret effort, setbacks, and ability—resulting in markedly different patterns of thought, emotion, and behavior throughout the learning process (Lou & Noels, 2019; Yeager & Dweck, 2020). While a FM-orientation is often linked to maladaptive academic beliefs and behaviors, a GM-orientation fosters resilience, mastery goals, and productive learning habits (Dweck & Yeager, 2019). Importantly, research has shown that a GM-orientation can be developed through explicit instruction and supportive environments, improving student outcomes over time. This suggests all students have the potential to adopt a GM with the right guidance. The implications of this are far-reaching: resilience is essential not only for academic success but also for long-term well-being, and even high-potential students may struggle when operating within an FM-orientation (Blackwell et al., 2007; Dweck, 2017).

https://doi.org/10.70020/eesh.2026.05.3
Corresponding Author: Jason D. Gold
Selection and peer-review under responsibility of the Organizing Committee of the conference
e-ISSN: 3062-1615

2.2. Research questions

Despite growing research confirming the importance of learner mindsets, few studies have examined how these beliefs manifest in non-WEIRD contexts—particularly through in-depth qualitative exploration. In response to this gap, this study investigates how Japanese university students' LMMS shape their academic beliefs and behaviors. Drawing on reflective writing and interviews, it examines how students make sense of academic effort, challenge, and failure in relation to their views on intelligence and ability.

This study is distinct from prior research in several key ways. Most mindset studies have focused on K–12 students, low-to-mid socioeconomic status (SES), minority, or academically at-risk populations in WEIRD countries, and have relied heavily on quantitative methods such as Likert-scale surveys.

In contrast, this study focuses on a relatively underexplored group: Japanese EAP students at a high-level national university, primarily from mid-to-high SES backgrounds. Using a qualitative approach, it investigates students' lived academic experiences to understand how learner mindsets manifest in this context and how these beliefs support or hinder academic success. Considering these gaps in the research, the following two research questions were addressed in this study:

i. *How do Japanese university students' LMMS shape their beliefs regarding intelligence and effort?*
ii. *How do these meaning systems shape their responses to academic mistakes and failure?*

3. Method

3.1. Study design

This study, part of a larger doctoral project, employed an embedded single-case qualitative design. Qualitative research emphasizes naturalistic inquiry and language-rich data, making it well-suited for understanding how individuals construct meaning from their lived experiences (Creswell, 2009; Denzin & Lincoln, 2011). This case study design allows for in-depth exploration of real-life, bounded systems and supports analysis of the "how" and "why" of complex social phenomena from a holistic, real-world perspective (Creswell & Poth, 2018; Yin, 2018).

The single case in this study was a 16-week EAP Seminar taught by the practitioner-researcher on study strategies, learner mindsets, and positive psychology (hereafter, "the Seminar") offered at a high-ranking national university in Japan. To ensure triangulation and depth, data were collected across six classes taught during the spring semesters of 2021–2023, all of which followed the same curriculum and assignment structure. An interpretive lens guided the research, acknowledging that educational experiences are shaped by cultural context (Angen, 2000). Rather than seeking generalizability, the study aimed to construct a holistic understanding of students' LMMS within their specific learning environment, valuing participants' subjective perspectives as valid truths (Yin, 2018).

3.2. Sample and participants

Participants were drawn from students enrolled in the Seminar. In qualitative research, purposeful sampling is used to select individuals likely to provide rich, relevant insights into the phenomenon being studied (Patton, 2015; Vasileiou et al., 2018). This approach maximizes data variation, allowing for deeper

https://doi.org/10.70020/eesh.2026.05.3
Corresponding Author: Jason D. Gold
Selection and peer-review under responsibility of the Organizing Committee of the conference
e-ISSN: 3062-1615

understanding of both population diversity and the phenomenon studied (Creswell & Poth, 2018). Rather than prioritizing frequency, qualitative research values the depth of participants' perspectives. Therefore, this study utilized respondents who offered meaningful insights into both the positive and negative aspects of LMMS, including typical cases—reflecting common student experiences—as well as unique cases highlighting atypical perspectives (Merriam & Tisdell, 2015). In total, data from 70 students were selected—50 female and 20 male—drawn from second-, third-, and fourth-year undergraduates (ages 20–21) studying English alongside their academic majors. The Seminar met once a week for 90 minutes, held via Zoom in 2021 due to COVID-19 restrictions, and in person in 2022 and 2023. Pseudonyms were used to protect student identities.

3.3. Data collection and analysis

This study utilized two qualitative data sources: weekly reflective writings and end-of-semester semi-structured interviews.

3.3.1. Reflective writing

The primary data consisted of student weekly reflective writings for each learning module submitted via Google Documents in a private Google Classroom throughout the 16-week Seminar (Figure 3). They included open-ended prompts exploring students' beliefs, experiences, and behaviors. Responses averaged 1,000 words per student. As English language learners, this format allowed respondents to express their thoughts at their own pace, reducing language anxiety and supporting deeper reflection. It also aligned with the Seminar's goal of encouraging metacognitive awareness and the practical application of course concepts. Additionally, these writings provided an indirect means of observing students' beliefs and habits (Yin, 2018).

STUDY STRATEGIES & GROWTH MINDSET COURSE MODULES	
Week 1	Class Introduction & Icebreaking Activities
Week 2	Academic Identity
Week 3	Academic Sense of Belonging
Week 4	Time Management & Study Strategies
Week 5	Procrastination & Study Strategies
Week 6	How We Learn & Learner Mindsets
Week 7	Fixed & Growth Mindsets
Week 8	Goals & Goal-Setting (Part 1)
Week 9	Goals & Goal-setting (Part 2); Challenge & Grit (Part 1)
Week 10	Challenge & Grit (Part 2)
Week 11	Failure (Part 1)
Week 12	Failure (Part 2); Stress (Part 1)
Week 13	Stress (Part 2)
Week 14	Negative Thinking
Week 15	Success
Week 16	Final Reflection Interview

Figure 3. Seminar Learning Modules

https://doi.org/10.70020/eesh.2026.05.3
Corresponding Author: Jason D. Gold
Selection and peer-review under responsibility of the Organizing Committee of the conference
e-ISSN: 3062-1615

3.3.2. End-of-semester semi-structured interviews

In the final week, students completed a 10–15-minute Zoom interview. Questions were provided in advance to reduce anxiety. The semi-structured format followed a set of open-ended questions, while allowing for follow-up questions to elicit richer responses and clarify key insights. Interviews were recorded using Zoom, with the videos for the purposefully selected participants transcribed using Otter.ai.

3.3.3. Data analysis

Data were analyzed using a type of thematic analysis, Template Analysis (TA), which balances deductive and inductive approaches, integrating theoretical concepts while remaining open to new insights (Braun & Clarke, 2013; Brooks et al., 2015). TA was selected for its flexibility in refining coding structures throughout analysis. Initial a priori categories were derived from the Seminar's module topics and the theoretical framework of LMMS. Coding was both inductive and deductive, using in vivo and values coding to center participants' perspectives (Saldaña, 2013). The coding process was iterative, with each new data subset compared to the evolving coding framework and revised as needed to ensure comprehensive representation. MAXQDA was used to code, organize, and refine themes

Qualitative analysis of students' reflective writings and final interviews centered around three core areas of the LMMS: (1) intelligence and effort, (2) mistakes, and (3) failures. These categories, drawn from the study's theoretical framework, structured the analysis. Within each, data were coded for GM and FM beliefs and behaviors, along with emerging themes reflecting students' lived experiences and the social influences that shaped their mindset beliefs.

Participant quotes are included to illustrate key themes, with selections chosen for depth and insight rather than frequency (Patton, 2015). To indicate prevalence, "a number" and "some" refer to common responses, while "several" and "a few" reflect less frequent perspectives. These terms are used interpretively to convey variation without quantifying. Many students displayed a stronger tendency toward either a FM or GM. To reflect this, "FM-oriented" and "GM-oriented" are used to indicate respondents' dominant patterns of thinking in a given context, without implying fixed traits or deficiencies. Since mindsets exist on a continuum and shift in response to experience and social influence, these terms capture broad tendencies while acknowledging their dynamic nature. The tables below present key themes and exemplar quotes illustrating participants' perspectives.

4. Results

4.1. Category 1: Students' intelligence & effort beliefs/practices

4.1.1. GM-Oriented

GM-oriented students' reflections revealed two key themes: (1) intelligence can grow through effort, and (2) persistence leads to success regardless of innate ability. While some acknowledged natural talent, most emphasized motivation and perseverance as the primary drivers of academic progress.

https://doi.org/10.70020/eesh.2026.05.3
Corresponding Author: Jason D. Gold
Selection and peer-review under responsibility of the Organizing Committee of the conference
e-ISSN: 3062-1615

Themes	Subthemes	Exemplar Quote
Intelligence Can Grow	Intelligence develops through effort	*"The more we learn, the more knowledge we acquire... I believe it is possible to always improve our intelligence." – Naomi*
	Intelligence alone does not ensure success	*"Effort is the major cause of academic success. No matter how smart someone is, they can't get high grades if they don't study at all... Intelligence helps place someone further in front at the starting line, but who wins the race depends on effort." – Misao*
Persistence Leads to Success	Constant effort leads to improvement	*"Some people are geniuses from birth, but others become smart through effort... My grades were poor in elementary school, but I studied hard in junior high, improved, and now feel I can achieve anything as long as I don't stop trying." – Chiyoko*
	Goals and effort lead to achievement	*"Even ordinary students with clear goals and enthusiasm can achieve academic success through hard work." – Yuzuki*
	Perseverance is part of intelligence	*"Working hard is not something everyone can do... The concentration and perseverance required for effort are also factors in smartness." – Shion*

Figure 4. GM Themes: Intelligence/Effort Beliefs

Many students described gaining confidence and resilience through effortful learning, often contrasting natural ability with the benefits of persistence. Although some acknowledged innate differences, they consistently viewed effort as the key to long-term success. These reflections highlight how GM-oriented LMMSs emphasize malleability, sustained effort, and growth through challenge.

4.1.2. FM-Oriented

However, some students expressed a FM-orientation, believing intelligence is innate and largely unchangeable. They described ability as genetically determined, using terms like "natural intelligence" and "talent." Comparing themselves to their "naturally" gifted peers reinforced this perspective and made them less likely to view effort as a means of improvement.

Theme	Subthemes	Exemplar Quote
Intelligence is Fixed	Intelligence is inherited and unchangeable	*"I think that we have a limit to our intelligence, and it is different from person to person... the limit of intelligence is determined by talent." – Koji*
	Effort cannot overcome natural intelligence	*"Intelligence is strongly influenced by genetics. In school, most smart people had smart parents... I envied them for their parents' smart genes, and that I was not born with such natural talent." – Asuka*

Figure 5. FM Themes: Intelligence/Effort Beliefs

Viewing intelligence as predetermined, FM-oriented students placed limited value on hard work, believing success stemmed from inborn traits. This perspective discouraged persistence, reduced academic confidence, and made them less likely to embrace challenges or strive for improvement.

4.1.3. Key influential socializers and lived experiences

Students frequently reflected on significant lived experiences and key influential socializers (KIS) that shaped their beliefs about intelligence and effort. Overall, five categories emerged: friends/peers, family, teachers, athletes, and popular media.

https://doi.org/10.70020/eesh.2026.05.3
Corresponding Author: Jason D. Gold
Selection and peer-review under responsibility of the Organizing Committee of the conference
e-ISSN: 3062-1615

KIS 1: Friends/Peers

Friends and peers were among the most frequently cited KIS, particularly those who demonstrated strong work ethic and commitment to their goals. GM-oriented students often admired peers who, despite already being high achievers, continued to put in significant effort. Conversely, FM-oriented students made negative comparisons, attributing peer success to innate talent rather than effort, which undermined their confidence.

Themes	Subthemes	Exemplar Quote
Peers as Role Models	Hardworking peers inspire perseverance	*"At school, there were lots of friends who were good at making efforts studying. They were already smart, but they did not stop studying. They thought about their lives and set their own difficult goals. When I experience a challenge, I often think of my friends from high school to help motivate me." – Yua*
	Ambitious peers motivate effort	*"Friends I made after entering university influenced my academic identity. Almost all of them have high aspirations, so they make me feel that I must make more effort." – Hana*
Negative Social Comparisons	Peer comparisons lower confidence	*"I tend to think that I'm just not smart enough and other students are so talented. I feel inferior….and it depresses me." – Takuya*
	Effort feels futile	*"My fixed mindset was influenced by setbacks in high school….I believed no matter how much I studied I would never be able to beat people who were smarter to begin with." – Hinata*
	Easy success of peers undermines motivation	*"I feel a fixed mindset when my friends succeed without trying. When a school test is difficult, I may not succeed despite my efforts, but some classmates achieve good results without studying. At such times, I feel that I don't have talent." – Kenji*

Figure 6. Influence of Peers on Intelligence/Effort Beliefs

Peers shaped students' beliefs in contrasting ways. While GM-oriented students viewed hardworking peers as motivating role models, reinforcing their belief that intelligence/ability grows through effort, FM-oriented students instead tended to interpret peer success as evidence of fixed intelligence—shaping their academic confidence, motivation, and resilience.

KIS 2-5: Family, Teachers, Athletes, and Popular Media

Beyond peers, students identified family, teachers, athletes, and media figures as KIS all positively influencing their beliefs about intelligence/effort. These key socializers all reinforced the idea that sustained effort leads to success.

https://doi.org/10.70020/eesh.2026.05.3
Corresponding Author: Jason D. Gold
Selection and peer-review under responsibility of the Organizing Committee of the conference
e-ISSN: 3062-1615

Themes	Subthemes	Exemplar Quote
Family Shapes Work Ethic	Modeling perseverance	*"My mother influenced me the most. She never gives up anything she started....Even when I tried to give up, my mother often stopped me. What I learned from my mother led me to where I'm today." – Chiaki*
	Fostering hard work	*"I was influenced by my older brother. He is a hard worker and I believed that it was a standard attitude about learning, so I studied as hard as him. Now, I know that attitude is rare, but I unconsciously acquired it thanks to my brother." – Akemi*
	Valuing effort over results	*"My father encourages me to try anything... His only condition is not giving up and doing my best. He does not require success, just sustained effort. He influenced me so much." – Tsuru*
Teachers Promote Hard Work		*"I took piano lessons for about 10 years. I had to play a difficult piece in a competition and struggled. My teacher told me if I played every day, I would be able to do it. With her support I kept practicing and could perform the piece. This taught me the importance of hard work." – Asami*
Athletes Model Discipline		*"When I experience a challenge, I think of my role model, Ichiro Suzuki. He said that a genius is not someone who succeeds effortlessly, but who achieves greatness through hard work. This makes me believe I can achieve anything through continuous effort." – Katsumi*
Fictional Characters Inspire Resilience		*"The main characters in Shonen Jump Manga are successful because they have grit....They never give up and always face challenges while thinking positively. When things don't go well and I feel down, I read these manga and feel encouraged." – Shion*

Figure 7. Influence of Key Socializers on Intelligence/Effort Beliefs

These socializers shaped students' views in distinct but complementary ways. Family members often modeled persistence and encouraged sustained effort. Teachers emphasized disciplined practice and sustained effort in learning, while role model athletes embodied that success is earned through discipline, not talent. Lastly, fictional characters served as sources of motivation and inspiration by portraying resilience in the face of adversity. Together, these KIS helped strengthen students' GM-oriented beliefs.

4.2. Category 2: Beliefs and responses to mistakes

The second major difference in students' LMMS involved their beliefs and responses to mistakes. GM-oriented students viewed mistakes as a natural and essential part of learning, especially as tools for improvement and resilience-building. Two core themes emerged: learning from mistakes to avoid repeating them, and using mistakes to develop perseverance. In contrast, FM-oriented students tended to interpret mistakes as signs of personal inadequacy, triggering embarrassment, loss of confidence, and fear of judgment, which often led to avoidance and disengagement from academic tasks and learning opportunities.

4.2.1. GM-oriented

Many GM-oriented students described mistakes as valuable opportunities to deepen understanding, refine strategies, and strengthen adaptability.

https://doi.org/10.70020/eesh.2026.05.3
Corresponding Author: Jason D. Gold
Selection and peer-review under responsibility of the Organizing Committee of the conference
e-ISSN: 3062-1615

Themes	Subthemes	Exemplar Quote
Mistakes Facilitate Learning	Mistakes are essential to learning	*"Every mistake is a stepping stone to success... We should make many mistakes in university and learn from them.... When we become adults we'll have responsibility for everything around us." – Chiyoko*
	Mistakes inform learning	*"I kept a 'mistake collection note' while studying for the university entrance exam... By collecting my mistakes, I can know my weak points and learn more things correctly..... I read it before every trial exam and my number of mistakes decreased! From this, I realized mistakes connect to my future success " – Mizuki*
Mistakes Build Resilience	Fear of mistakes limits growth	*"The most important thing is not being afraid to make mistakes. I believe that we grow by challenging ourselves without fear of making mistakes." – Shinsuke*

Figure 8. GM Perspectives on Mistakes

GM-oriented students used mistakes to pinpoint weaknesses, revise their learning strategies, and build confidence through persistence. Some tracked errors to prevent repeating them, while others saw mistakes as necessary stepping stones toward success. They believed that discomfort or embarrassment of mistakes risked hindering their growth. Thus, rather than threats to self-worth, for these students' mistakes were reframed as essential experiences that contributed to both academic and personal development.

4.2.2. FM-Oriented

Conversely, FM-oriented students viewed mistakes as inherently negative, often associating them to embarrassment, self-doubt, and fear of social judgment. Many traced these beliefs to past academic experiences, a results-driven education system, and cultural pressures, which led to avoidance of mistakes and reduced academic participation, risk-taking, and confidence.

Themes	Subthemes	Exemplar Quotes
Mistakes Create Social Anxiety	Fear of judgment lowers confidence	*"Whenever I make a mistake, I can't help getting embarrassed, because I feel that I am inferior to classmates.... I'm worried about what others think of me." – Yuzuki*
	Perfectionism increases pressure	*"I'm used to performing well and I have high standards for myself....when I make mistakes, I often feel discouraged and lose confidence in myself." – Kimiko*
	School culture discourages mistakes	*"In school, mistakes are seen as bad... teachers make a big deal about it as a problem and students laugh, which creates an environment where it is hard to make mistakes." – Chiaki*
Fear of Mistakes Limits Engagement	Negative experiences creates disengagement	*"It's difficult to ask questions or volunteer ideas because I fear mistakes... in the past I have been scolded and made fun of....I care what others think of me when I make mistakes..." – Eiko*
	Fear leads to giving up	*"I seriously tend to give up easily. I'm very afraid of any mistakes and the embarrassment caused by them...when I make any mistakes in public I immediately decide to give up." – Yudai*
Concern for Burdening Others ('Meiwaku')	Fear of inconveniencing classmates	*"Sometimes I have questions about the content of classes, but I don't ask questions because I always wonder whether my questions will make me look stupid... I feel nervous about such a situation, so I often hesitate to ask questions face-to-face." – Yudai*
		"I am afraid to make mistakes in front of others. I do not want others to be annoyed by my words." – Rio

Figure 9. FM Perspectives on Mistakes

https://doi.org/10.70020/eesh.2026.05.3
Corresponding Author: Jason D. Gold
Selection and peer-review under responsibility of the Organizing Committee of the conference
e-ISSN: 3062-1615

FM-oriented students associated mistakes with personal inadequacy, which discouraged participation or attempting academic challenges. These beliefs were often rooted in past schooling experiences where mistakes were seen as judgements of ability rather than learning opportunities. Believing intelligence was fixed, they often compared themselves to others to gauge self-worth, resulting in heightened social anxiety and an aversion to making mistakes publicly. High-achieving students especially struggled with mistakes later in their academic lives, having faced few setbacks earlier and thus lacking strategies to cope. In some cases, fear became overwhelming, leading to withdrawal or giving up altogether.

Contextual factors—such as emotional climate, classroom norms, and perceived peer support—also shaped whether students felt safe to participate. Cultural expectations also played a role. Some participants expressed concern about causing meiwaku—a culturally significant Japanese concept of burdening others—and became overly self-conscious that their mistakes might inconvenience classmates or disrupt the class, which discouraged participation. Students also described shifting views over time. In secondary school, where there was often one correct answer, mistakes were seen as personal shortcomings. At university, however, particularly in classrooms with supportive teachers and collaborative atmospheres, mistakes were reframed as opportunities for learning, with greater emphasis on expressing and developing ideas rather than producing a single correct answer.

4.3. Category 3: Beliefs and Responses to Failure

4.3.1. GM-Oriented

The final key difference in students' LMMS concerned their perceptions and responses to failure—a theme that appeared more frequently than any other, underscoring the importance these beliefs had on students' academic experiences. GM-oriented students expressed three main perspectives: the importance of reflecting on failure to support growth and future success, managing and overcoming the negative emotions tied to failure, and holding optimistic or indifferent beliefs about how others perceived their failures.

Themes	Subthemes	Exemplar Quote
Failure Drives Growth	Failure necessary for success	*"I think it is impossible to be successful in life without failing. Everyone experiences failure... It is because of failures that we grow and come closer to success." – Chiaki*
	Failure deepens character	*"Without failure, people get overconfident... Experiencing failure and staying modest are necessary for success." – Rio*
Managing Negative Emotions	Accepting emotions	*"When I experience failure, I feel very sad, and it takes some time to move on... Feeling sad after failure is okay, as long as you learn from it and get back on your feet." – Naomi*
	Recovering after setbacks	*"I am often shocked when I experience failure... But then I think about what I have to do so I don't make the same mistake again." – Mami*
Supportive/Neutral Social Perceptions of Failure	Encouragement from others	*"Most people think failure enables us to improve... Even if I fail, they encourage me and help me regain confidence." – Kasumi*
	Indifference to failure	*"I think others don't think anything of me when I fail... because I don't care if someone I don't know fails...it doesn't affect me." – Ryoichi*

Figure 10. GM Perspectives on Failure

https://doi.org/10.70020/eesh.2026.05.3
Corresponding Author: Jason D. Gold
Selection and peer-review under responsibility of the Organizing Committee of the conference
e-ISSN: 3062-1615

GM-oriented students saw failure as essential to learning and long-term development. They used it to reflect on mistakes, refine strategies, and build resilience. Some also noted that failure helped prevent overconfidence, keeping them humble and focused on growth. Participants also emphasized the importance of emotional coping. While many initially experienced frustration or disappointment, they ultimately redirected those emotions toward improvement. Some processed emotions independently through reflection or goal-setting, while others relied on encouragement from peers or mentors. A final distinction was how students believed others perceived their failures. Participants generally felt that others were supportive or unconcerned. This normalization of failure reduced fear of judgment and helped them stay focused on learning and progress.

4.3.2. FM-oriented

In contrast, FM-oriented students viewed failure as a reflection of personal inadequacy, leading to diminished confidence, social embarrassment, and ongoing emotional distress. Many also exhibited perfectionistic tendencies and feared judgment from others, making them particularly sensitive to failure and prone to self-criticism.

Themes	Subthemes	Exemplar Quote
Failure as Personal Deficiency	Failure damages self-worth	*"I get depressed and care about it for a long time when I fail. Even if I try to tell myself not to care and that failure can lead to future success if I learn from it, I cannot be positive..." – Naoko*
	Perfectionism intensifies self-criticism	*"I tend to evaluate my qualities in extreme black or white categories...once I fail at something, I think I'm not good enough and lose confidence in myself. I am a perfectionist. I tend to focus only on results." – Asami*
Fear of Judgment and Social Perception	Fear of disappointing others	*"I think people are disappointed when I fail. I may be too worried about their reaction but I cannot stop thinking so....I'm afraid they will think I am not a better person than they expected." – Fumi*
	Embarrassment damages self-image	*"I feel really ashamed. I'm afraid that someone who sees my failure is disappointed in me. I want to be seen as a useful person....experiencing failure in front of others is embarrassing because it leads to ruining my image." – Setsuko*

Figure 11. FM Perspectives on Failure

For many FM-oriented students, failure triggered intense emotions such as shame, discouragement, and self-doubt. Rather than using setbacks to improve, they often saw them as proof of inadequacy. Perfectionistic students especially struggled, interpreting even minor failures in rigid, all-or-nothing terms that deepened their emotional distress and negatively impacted their confidence. Many were also highly concerned with how others perceived their failures, fearing judgment, ridicule, or disappointing those who expected them to succeed. This fear discouraged vulnerability, risk-taking, and help-seeking. Overall, FM-oriented students viewed failure as a threat to both self-worth and social standing. Their fear of judgment and difficulty separating failure from identity reduced their willingness to engage with challenges, limiting resilience and academic development.

https://doi.org/10.70020/eesh.2026.05.3
Corresponding Author: Jason D. Gold
Selection and peer-review under responsibility of the Organizing Committee of the conference
e-ISSN: 3062-1615

5. Discussion

This study examined how Japanese university students' LMMS manifested across academic contexts. Participant responses reflected a range of orientations, with GM- and FM-oriented students expressing contrasting beliefs about intelligence, effort, and responses to academic challenges, mistakes, and failures. These differences shaped their motivation, attitudes, and behaviors. Consistent with prior research, the findings suggest that LMMS significantly influence academic engagement and performance (e.g., Dweck, 2017; Haimovitz & Dweck, 2017).

5.1. Intelligence & effort beliefs/practices

Students' beliefs about intelligence/effort played a central role in shaping their academic motivation, strategies, and persistence (Dweck, 2017; Dweck et al., 2014). These beliefs formed meaning systems that guided their cognitive, emotional, and behavioral responses throughout their academic journey (Lou & Noels, 2019; Yeager & Dweck, 2020). GM-oriented students viewed intelligence as malleable and improvement as always possible through effort. This belief empowered them to engage actively, refine strategies, and seek support—focusing on self-improvement rather than ruminating on (perceived) shortcomings.

Through consistent effort and positive outcomes, they built confidence and resilience, making them more willing to embrace challenges. While some acknowledged natural talent, they emphasized that success depended more on effort than innate ability. These findings align with previous research showing that GM-oriented students prioritize growth and persist despite setbacks (Dweck, 2017; Yeager & Dweck, 2020). A less common but notable theme was the influence of juku (cram schools). In contrast to Western contexts, where peer motivation often occurs in informal settings, these structured academic spaces in Japan appeared to normalize sustained effort as a shared social expectation.

Conversely, FM-oriented students held stronger beliefs in the genetic basis of intelligence, often referencing IQ, natural talent, or inherited ability. As a result, they viewed effort as having a limited impact and attributed success primarily to inherent traits. While prior research suggests FM-oriented students may equate effort with low ability (Dweck et al., 2014; Yeager & Dweck, 2020), Japanese participants did not view effort as synonymous with incompetence or wholly negative. Rather, they acknowledged its role but believed innate ability trumped effort, ultimately set a ceiling for achievement.

5.2. Response to academic challenges

Students' beliefs about intelligence/effort also shaped how they approached academic challenges. GM-oriented participants, who saw effort as essential for growth, consistently embraced challenges. Many did not view themselves as naturally gifted but believed persistence would lead to improvement, boosting confidence and creating a positive feedback loop, where each success encouraged further risk-taking (Limeri et al., 2020). Consistent with prior research, they pursued mastery goals over performance goals, seeing challenge as essential for both personal and academic success (Blackwell et al., 2007; Dweck, 2017).

In contrast, FM-oriented students were deeply concerned with how their ability compared to others and often prioritized performance or avoidance goals. While some sought to prove superiority, most of the

https://doi.org/10.70020/eesh.2026.05.3
Corresponding Author: Jason D. Gold
Selection and peer-review under responsibility of the Organizing Committee of the conference
e-ISSN: 3062-1615

participants avoided risk due to fear of mistakes or embarrassment. Because they viewed intelligence/ability as largely fixed, setbacks were interpreted as threats to their identity. This fear-based disengagement—especially in public settings— heightened anxiety and ultimately hindered academic growth (Dweck & Yeager, 2019; Nussbaum & Dweck, 2008).

5.3. Beliefs about and responses to mistakes

Research shows that GM- and FM-oriented students interpret and respond to mistakes differently (e.g., Cury et al., 2006; Limeri et al., 2020)—a pattern also reflected in the Japanese participants. While GM-oriented students did not enjoy making mistakes, they viewed them as normal and necessary for learning. Their belief in intelligence/ability as malleable led them to interpret mistakes as temporary and context-specific rather than indicators of fixed ability. They saw academic mistakes as reflection opportunities to identify weaknesses, refine strategies, and prevent future errors—consistent with prior findings that GM-oriented students use mistakes as tools for growth (Dweck, 2017; Robins & Pals, 2002). These experiences helped normalize mistakes and reduce unrealistic expectations of effortless success. Through mastery-focused behaviors—putting in effort, adjusting strategies, and seeking help—students became more willing to take academic risks, such as speaking in class or applying to competitive universities (Blackwell et al., 2007; Dweck & Yeager, 2019).

Conversely, FM-oriented students were more vulnerable to mistakes due to their belief that ability is fixed (Dweck, 2017; Murphy & Gash, 2020). This led them to interpret errors as signs of inadequacy, triggering embarrassment and self-doubt. Among the participants, this manifested in frequent peer comparisons, with academic performance closely tied to self-worth. Unfavorable comparisons diminished their confidence and exacerbated fear of making mistakes, especially in public. Driven by concern for social image, many prioritized avoiding errors and withdrew from class participation to avoid embarrassment or appearing unintelligent.

Distinct from research with WEIRD participants, some FM-oriented Japanese students also cited meiwaku—the fear of burdening others—as a source of academic anxiety. Rooted in Japan's emphasis on group harmony, this concern made students hesitant to ask questions or speak up, fearing their mistakes might inconvenience others (Tsunekawa, 2023; Woodman, 2023). For participants with past insecurities or negative experiences, this fear became amplified. They worried mistakes might inconvenience classmates or disrupt the class, thus becoming hypersensitive about maintaining harmony. This shift from mastery to avoiding disruption limited both engagement and learning in socially uncertain settings.

5.4. Students' beliefs about and responses to failure

The final theme explored students' beliefs and responses to failure. Research shows that GM-oriented students demonstrate greater resilience by attributing setbacks to controllable factors like effort or strategy, rather than fixed ability (Dweck, 2017; Lou & Noels, 2019). This pattern was reflected in the current study. While failure triggered negative emotions, GM-oriented students responded with reflection and adjustment—identifying weaknesses, revising approaches, and seeking support. These behaviors gradually built confidence and competence. Some also noted that occasional failure prevented

https://doi.org/10.70020/eesh.2026.05.3
Corresponding Author: Jason D. Gold
Selection and peer-review under responsibility of the Organizing Committee of the conference
e-ISSN: 3062-1615

overconfidence and complacency, serving as a reminder that growth is always possible. Ultimately, failure was seen as a natural and necessary part of success—both in education and in life.

The GM-oriented participants also tended to believe failure elicited empathy rather than judgment. Their compassion toward others' setbacks reinforced the belief that others would respond similarly, helping protect their confidence and reduce self-criticism. Others assumed indifference, reasoning that since they paid little attention to others' failures, others likely did the same. In both cases, detaching failure from identity allowed them to remain focused on growth rather than external judgment.

In contrast, most FM-oriented students viewed failure as entirely negative, interpreting it as a sign of personal inadequacy. Setbacks triggered strong emotional responses such as disappointment, discouragement, or even depression—especially among those with perfectionist tendencies. This pattern aligns with existing research showing that students who believe intelligence is fixed are more likely to link failure to identity, damaging self-esteem and reducing resilience (Dweck, 2017; Yeager & Dweck, 2020).

Many were also highly concerned with how others perceived their failures, fearing judgment or ridicule. Because they saw ability as fixed, failure reinforced feelings of inadequacy. To protect their self-image, some avoided difficult tasks altogether. This pattern echoes existing research on LMMS, showing that GM and FM beliefs shape students' thoughts, emotions, and behaviors—resulting in distinctly different responses to challenge and failure (Lou & Noels, 2019; Yeager & Dweck, 2020).

5.5. Limitations and future research

This qualitative case study focused on the LMMS of Japanese students at a single high-level national university. As is typical of qualitative research, the findings are not intended to be generalizable but rather offer insight into students' lived experiences within a specific context. These results contribute to a more nuanced understanding of learner mindsets in relation to academic challenges, effort, and failure. Future research should explore more deeply the sociocultural influences identified here—particularly the role of key influential socializers (KIS)—and how they shape mindset beliefs. Research within different university types or educational stages may also reveal how different environments influence these beliefs over time.

Two limitations warrant attention. First, as students reflected retrospectively on their experiences, their responses may have been shaped by recall bias. While their reflections represent the most salient insights at the time of the study, their perceptions may have shifted over time. Future studies could incorporate longitudinal or real-time methods—such as journaling, follow-up interviews, or classroom observations—to track belief development more dynamically. Second, all data were collected in English, the participants' second language, which may have limited the depth or nuance of some responses. Future research could be conducted in Japanese or adopt a bilingual approach to allow for more natural expression and potentially richer insights.

6. Conclusion

Learner mindset beliefs fundamentally shape how students think, feel, and act in academic settings. This study offers insight into how these beliefs manifest in Japanese higher education, highlighting how students' interpretations of effort, mistakes, and failure—whether as threats or opportunities—are deeply rooted in their underlying views of intelligence and ability. Overall, GM-oriented students demonstrated

greater resilience, persistence, and motivation, while FM-oriented students were more likely to disengage due to fear of judgment or self-doubt.

These findings underscore the powerful influence of LMMS in shaping academic engagement and performance. In restrictive, test-driven environments, students may internalize narrow definitions of intelligence, which can foster performance anxiety, diminish confidence, and reduce motivation. In contrast, learning environments that normalize struggle and value effort help promote beliefs that growth is possible, failure can be instructive, and ability is not fixed.

Educators play a central role in shaping these beliefs through their expectations, classroom culture, and the messages they communicate about learning and success. When teachers model a love of learning, demonstrate care for students as unique individuals, and encourage persistence, they help cultivate learner mindsets that support both academic achievement and long-term personal growth. Understanding how students perceive their academic experiences—and what beliefs those experiences reinforce—is essential to creating environments that support every student's capacity to grow.

Author Contributions

The author confirms sole responsibility for the study conception and design, data collection, data analysis and interpretation, manuscript preparation, and final approval of the submitted version.

Conflict of Interest Statement

The author declares that there is no conflict of interest.

Ethical Statement

Ethical approval for this study was obtained from the University of Indiana Institutional Review Board (Protocol # 2002564806).

Funding

The author declares that there is no funding received for this research.

References

American Educational Research Association, American Psychological Association, & National Council on Measurement in Education. (2014). *Standards for educational and psychological testing*. American Educational Research Association.

Angen, M. J. (2000). Evaluating interpretive inquiry: Reviewing the validity debate and opening the dialogue. *Qualitative Health Research*, *10*(3), 378-395. https://doi.org/10.1177/104973230001000308

Bernardo, A., Esteban, M., Fernández, E., Cervero, A., Tuero, E., & Solano, P. (2016). Comparison of personal, social and academic variables related to university drop-out and persistence. *Frontiers in psychology, 7,* 1610. https://doi.org/10.3389/fpsyg.2016.01610

Blackwell, L. S., Trzesniewski, K. H., & Dweck, C. S. (2007). Implicit theories of intelligence predict achievement across an adolescent transition: A longitudinal study and an intervention. *Child Development, 78*(1), 246-263. https://doi.org/10.1111/j.1467-8624.2007.00995.x

Braun, V., & Clarke, V. (2013). *Successful qualitative research: A practical guide for beginners*. Sage.

Brooks, J., McCluskey, S., Turley, E., & King, N. (2015). The utility of template analysis in qualitative psychology research. *Qualitative Research in Psychology*, *12*(2), 202-222. https://doi.org/10.1080/14780887.2014.955224

Creswell, J. W. (2009). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (3rd ed.). Sage Publications.

Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th edition). Sage.

Cury, F., Elliot, A. J., Da Fonseca, D., & Moller, A. C. (2006). The social-cognitive model of achievement motivation and the 2 x 2 achievement goal framework. *Journal of Personality and Social Psychology, 90*(4), 666–679. https://doi.org/10.1037/0022-3514.90.4.666

Datu, J. A. D., Valdez, J. P. M., & King, R. B. (2016). Perseverance counts but consistency does not! Validating the short grit scale in a collectivist setting. *Current Psychology, 35*(1), 121-130. https://doi.org/10.1007/s12144-015-9374-2

Denzin, N. K., & Lincoln, Y. S. (Eds.). (2011). *The Sage handbook of qualitative research*. Sage.

Dubinsky, J. (2010). Neuroscience education for prekindergarten-12 teachers. *The Journal of Neuroscience, 30*(24), 8057-8060. https://doi.org/10.1523/jneurosci.2322-10.2010

Dweck, C. S. (2017). *Mindset. Updated edition: Changing the way you think to fulfil your potential.* Robinson.

Dweck, C. S., & Yeager, D. S. (2019). Mindsets: A View from Two Eras. *Perspectives on Psychological Science, 14*(3), 481-496. https://doi.org/10.1177/1745691618804166

Dweck, C. S., Walton, G. M., & Cohen, G. L. (2014). Academic tenacity: Mindsets and skills that promote long-term learning. *Bill & Melinda Gates Foundation*.

Farrington, C. A., Roderick, M., Allensworth, E., Nagaoka, J., Keyes, T. S., Johnson, D. W., & Beechum, N. O. (2012). *Teaching adolescents to become learners: The role of noncognitive factors in shaping school performance*. University of Chicago, Consortium on Chicago School Research.

Farruggia, S. P., Han, C. W., Watson, L., Moss, T. P., & Bottoms, B. L. (2018). Noncognitive factors and college student success. Journal of College Student Retention: Research, *Theory & Practice, 20*(3), 308-327. https://doi.org/10.1177/1521025116666539

Faulkner, R., Jang, M., Liu, X., Duan, X., Sailor, K. A., Kim, J. Y., Ge, S., Jones, E. G., Ming, G. L., Song, H., & Cheng, H. J. (2008). *Proceedings of the National Academy of Sciences*. Development of hippocampal mossy fiber synaptic outputs by new neurons in the adult brain, *105*(37), 14157-14162. https://doi.org/10.1073/pnas.0806658105

Haimovitz, K., & Dweck, C. S. (2017). The origins of children's growth and fixed mindsets: New research and a new proposal. *Child development*, *88*(6), 1849-1859. https://doi.org/10.1111/cdev.12955

Limeri, L. B., Carter, N. T., Choe, J., Harper, H. G., Martin, H. R., Benton, A., & Dolan, E. L. (2020). Growing a growth mindset: Characterizing how and why undergraduate students' mindsets change. *International Journal of STEM Education, 7*(1), 1-19. https://doi.org/10.1186/s40594-020-00227-2

Lou, N. M., & Noels, K. A. (2019). Promoting growth in foreign and second language education: A research agenda for mindsets in language learning and teaching. *System*, *86,* 102126. https://doi.org/10.1016/j.system.2019.102126

Lucas, B., & Spencer, E. (2018). *Developing Tenacity: Teaching learners how to persevere in the face of difficulty (Pedagogy for a Changing World series)*. Crown House Publishing Ltd.

Martin, K. (2021). *Evolving education: Shifting to a learner-centered paradigm*. Impress.

Merriam, S. B., & Tisdell, E. J. (2015). *Qualitative research: A guide to design and implementation*. John Wiley & Sons.

Murphy, F., & Gash, H. (2020). I Can't Yet and Growth Mindset. *Constructivist Foundations, 15*(2), 83-94. https://constructivist.info/15/2/083

Nussbaum, A. D., & Dweck, C. S. (2008). Defensiveness versus remediation: Self-theories and modes of self-esteem maintenance. *Personality and Social Psychology Bulletin, 34*(5), 599–612. https://doi.org/10.1177/0146167207312960

Patton, M. Q. (2015). *Qualitative research and evaluation methods* (4th ed.). Sage.

Robins, R. W., & Pals, J. L. (2002). Implicit self-theories in the academic domain: Implications for goal orientation, attributions, affect, and self-esteem change. *Self and Identity, 1*(4), 313–336. https://doi.org/10.1080/15298860290106805

Saldaña, J. (2013). *The coding manual for qualitative researchers*. SAGE Publications Limited.

Smiley, P. A., Buttitta, K. V., Chung, S. Y., Dubon, V. X., & Chang, L. K. (2016). Mediation models of implicit theories and achievement goals predict planning and withdrawal after failure. *Motivation and Emotion, 40*(6), 878–894. https://doi.org/10.1007/s11031-016-9575-5

Tsunekawa, K. (2023, March 13). *Never Allowed to Fail? The Unspoken Culture of the Japanese*. TsunaguJapan. https://www.tsunagujapan.com/behind-the-stereotype-what-is-japan-really-like/

Vasileiou, K., Barnett, J., Thorpe, S., & Young, T. (2018). Characterising and justifying sample size sufficiency in interview-based studies: Systematic analysis of qualitative health research over a 15-year period. *BMC Medical Research Methodology*, *18*(1), 1-18. https://doi.org/10.1186/s12874-018-0594-7

Wanzer, D., Postlewaite, E., & Zargarpour, N. (2019). Relationships among noncognitive factors and academic performance: Testing the University of Chicago Consortium on School Research model. *AERA Open, 5*(4), 1-20. https://doi.org/10.1177/2332858419897275

Watson, K. M. (2019). The Operationalization of Integrated Internal Action Frameworks for Classroom Identity Development and Self-regulating Learners. *The European Journal of Social & Behavioural Sciences, 25*(2), 2948-2976. https://doi.org/10.15405/ejsbs.257

Weissberg, R. P., Durlak, J. A., Domitrovich, C. E., & Gullotta, T. P. (2015). Social and emotional learning: Past, present, and future. In J. A. Durlak, C. E. Domitrovich, R. P. Weissberg, T. P. Gullotta, & J. Comer (Eds.), *Handbook of Social and Emotional Learning: Research and Practice (pp. 3-19).* Guilford Press.

Willis, J. (2010). Assessment for learning as a participative pedagogy. *Assessment Matters, 2*, 65–84. https://doi.org/10.18296/am.0079

Woodman, K. (2023, April 21). *Japan Under Pressure: When Social Pressure Becomes Too Strong*. Living in Japan. https://jobsinjapan.com/living-in-japan-guide/japan-under-pressure-when-social-pressure-becomes-too-strong/

Yeager, D. S., & Dweck, C. S. (2012). Mindsets that promote resilience: When students believe that personal characteristics can be developed. *Educational Psychologist, 47*(4), 302–314. https://doi.org/10.1080/00461520.2012.722805

Yeager, D. S., & Dweck, C. S. (2020). What can be learned from growth mindset controversies? *American Psychologist, 75*(9), 1269-1284. https://doi.org/10.1037/amp0000794

Yeager, D. S., Henderson, M. D., D'Mello, S., Paunesku, D., Walton, G. M., Spitzer, B. J., & Duckworth, A. (2014). Boring but important: A self-transcendent purpose for learning fosters academic self-regulation. *Journal of Personality and Social Psychology*, *107*(4), 559-580. https://doi.org/10.1037/a0037637

Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). Sage.