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Research Article:

Exploring the Impact of Effort Praise on Self-Efficacy, Growth Mindset and English-speaking Proficiency in a Student with Learning Difficulties in an After-School Programme in China

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ABSTRACT

Students with Learning Difficulties (LD) often face learning challenges due to low self-efficacy and a fixed mindset. This study conducted a comparative analysis of self-efficacy and growth mindset among typically developing students and a student with LD, followed by investigating the impact of effort praise on a student with LD in an after-school class in China, focusing on its effects on self-efficacy, mindset and English-speaking proficiency. A cross-sectional study was performed among typically developing students through an online survey, while a mixed-method, single-case study design was employed for a student with LD. A total of 79 typically developing students aged 8 to 12 volunteered to complete the online survey using self-efficacy and growth mindset scales. A 10-year-old student with LD participated in a teaching intervention that utilised effort praise. The results indicate that the student with LD had lower overall self-efficacy and growth mindset scores compared to peers. However, effort praise positively impacted the student, leading to improved scores in both self-efficacy and growth mindset, as well as enhanced English-speaking proficiency. This research highlights the importance of teachers prioritising effort praise, as it can significantly improve self-efficacy and foster a growth mindset in students with LD.

Keywords: Learning Difficulties, self-efficacy, mindset, English, effort praise

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INTRODUCTION

Learning Difficulties (LD) are conditions that can hinder an individual's success in a typical classroom environment. Students with LD are those who struggle to listen, speak, read, write, or learn specific skills that align with their potential, despite having adequate opportunities to learn (Lyon et al., 2001). Many students with LD may also exhibit patterns of behaviour that significantly deviate from what is considered appropriate for their age and context. These behaviours can profoundly impact their learning processes, personal development, and interpersonal relationships (Sasikala, 2023). A study by Cheng et al. (2021), conducted with 3,541 children in China, found that the prevalence of LD is approximately 6%. Their findings highlight a significant issue in education, underscoring the urgent need for targeted support strategy for Chinese students with LD.

Students with LD frequently face challenges related to self-efficacy and academic ability (Lackaye et al., 2006). Self-efficacy refers to an individual's belief in their ability to demonstrate the behaviours needed to achieve specific learning outcomes (Bandura, 1977). Lower self-efficacy can negatively impact individuals learning attitude and strategies (Dweck, 2006). Encouraging these students to adopt a growth mindset can benefit them in boosting self-efficacy and enhancing ability to advocate for their own needs (Rhew et al., 2018).

A fixed mindset is the belief that basic qualities, such as intelligence or talent, are fixed traits that cannot be changed. People with a fixed mindset focus on proving their talent, often avoiding challenges and feeling threatened by others' success, seeing intelligence as static. Conversely, those with a growth mindset believe intelligence can grow, view effort as key to mastery, and see feedback and setbacks as opportunities for learning (Dweck, 2006).

Praising students during learning boosts motivation and shapes beliefs. Students praised for effort tend to adopt a growth mindset, believing in the potential to develop abilities. In contrast, those praised for outcomes often adopt a fixed mindset, impacting their resilience and approach to learning challenges (Yeager & Dweck, 2012). Studies showed that praising effort in the learning process can boost their confidence (Muller & Dweck, 1998). As to that, a classroom instructional strategy such as using "effort praise" provides a possible solution to encourage students with learning difficulty to participate more effectively in learning. Effort praise refers to praise that emphasises the work, effort, or actions of the child. Through effective praise from teachers, students with LD can cultivate a growth mindset (Claro et al., 2016), which emphasises effort and perseverance. This mindset helps them build confidence and take ownership of their learning achievements.

English is recognised as a crucial international language in China, with government policies mandating its teaching from grade three in primary school. Students typically undergo nine years of compulsory education. Those needing extra help can attend after-school enrichment classes to enhance their English abilities, particularly speaking. After-

school language enrichment classes provide a better learning environment and employ student-oriented teaching methods that focus on individual learning needs. These classes typically consist of small groups of fewer than 12 students or one-on-one instruction. After-school enrichment classes support students with LD through personalised teaching, enjoyable activities, and smaller class sizes. Since special educational services and supports are not yet compulsory in all public schools in China, many students with LD who require additional instruction in English are often enrolled by their parents in after-school English programmes. The growing number of students with LD in after-school enrichment programmes highlights the need to examine whether incorporating effort praise into an English after-school programme can effectively encourage and motivate these students in developing their English-speaking proficiency. Considering the importance of self-efficacy and a growth mindset in overcoming challenging tasks, such as acquiring speaking skills in English within the context of China, it is essential to explore how effort praise influences self-efficacy and mindset among students with LD.

LITERATURE REVIEW

Self-efficacy and Academic Achievement

Self-efficacy, which refers to students' belief in their ability to acquire new skills or complete tasks, plays a critical role in academic success (Bedford, 2017). According to Bedford (2017), success can enhance self-efficacy, boosting academic performance across various tasks. However, while high self-efficacy is desirable, it can sometimes lead to complacency, where students may overestimate their competence and fail to reach their full potential. Peer influence also plays a role in fostering self-efficacy, as observing successful peers can motivate students to believe in their own ability to complete assignments or activities, regardless of past performance. Thus, understanding how to enhance self-efficacy is essential for all students.

Lackaye et al. (2006) found that students with LD often struggle with lower levels of self-efficacy due to their personal history of academic challenges. In their study using the Academic Self-efficacy Scale, which included 11 items assessing students' beliefs about their ability to manage different academic tasks, students with LD exhibited lower self-efficacy, as well as more negative emotional states such as hopelessness, compared to their peers without LD. This lower self-efficacy is significant because it directly impacts the effort students are willing to invest in their learning, making it a crucial factor in their overall academic progress. Motlagh et al. (2011) explored the relationship between self-efficacy and academic achievement among high school students. A sample of 250 students completed a self-efficacy scale, and their academic achievement was measured using grade point averages. Data analysis revealed significant correlations between self-evaluation, self-directing, self-regulation and academic achievement. Notably, self-evaluation and self-regulation emerged as key predictors, accounting for 10% of the variance in academic performance. The findings underscore the importance of self-efficacy, particularly self-

evaluation and self-regulation, as crucial factors in promoting academic success. On the other hand, Hwang et al. (2016) examined the reciprocal relationship between self-efficacy and academic achievement in 1,177 Korean students over five years. Results showed that past academic performance strongly influenced future self-efficacy, which in turn impacted academic achievement. The study highlights the need for interventions targeting self-efficacy and achievement, emphasising their reciprocal influence.

Mindset and Academic Achievement

Numerous studies have examined the relationship between academic achievement and growth mindset, consistently highlighting the positive impact of a growth mindset on students' resilience, psychological well-being and overall academic performance. For instance, intervention studies such as those by Aronson et al. (2002) have shown that teaching students about neuroplasticity and the brain's capacity for growth fosters a growth mindset, leading to greater academic engagement and improved performance. In their study, students who learned about the malleability of the brain significantly outperformed their peers, achieving higher academic scores. While younger students may be more adaptable in changing their perspectives, it is important to note that older students can also develop a growth mindset through targeted interventions.

Comparative studies of growth and fixed mindsets further emphasise the profound influence that mindset has on learning outcomes. Research by Grant and Dweck (2003) demonstrated that students with a growth mindset tend to achieve higher academically, especially when facing challenges. Conversely, those with a fixed mindset are more likely to exhibit maladaptive behaviours, such as motivational deficits, which hinder academic progress. Supporting this perspective, longitudinal studies, such as those by Blackwell et al. (2007), illustrate that students with a growth mindset exhibit an upward academic trajectory over two years, while those with a fixed mindset show stagnant performance. Additionally, students with a growth mindset report a stronger commitment to learning objectives, viewing effort as essential to success and being more inclined to adjust their strategies in the face of challenges.

Research by Haimovitz et al. (2011) further identified that students who maintain a fixed mindset experience declines in motivation, perceiving academic tasks merely as reflections of inherent ability. In contrast, students with a growth mindset demonstrate intrinsic motivation, leading to enhanced academic performance. Yeager and Dweck (2012) explain that these two mindsets stem from implicit theories of intelligence: the entity theory (fixed mindset) views intelligence as static, while the incremental theory (growth mindset) perceives intelligence as malleable. Students who adopt an incremental view tend to be more resilient and perform better academically, particularly during challenging transitions, as shown by Blackwell et al. (2007). Similarly, Claro et al. (2016) revealed that students with a growth mindset achieve greater academic success regardless of financial constraints, suggesting that belief in one's ability to grow intellectually outweighs socioeconomic factors.

Additionally, Zeng et al. (2016) found that students exhibiting a growth mindset, measured by Carol Dweck's Growth Mindset Inventory (2006), also demonstrated higher resilience and psychological well-being, as assessed by the Brief Resilience Scale (BRS) and the Flourishing Scale. On the other hand, Bai and Wang (2023) discovered that growth mindset, self-efficacy, and intrinsic value significantly influence self-regulated learning strategies. Notably, growth mindset emerged as the strongest predictor of self-regulated learning and English learning success, with monitoring and effort regulation being key contributors. The role of socio-cultural context in these relationships warrants further exploration. Overall, these studies underscore the significant role that mindset plays in shaping academic achievement, highlighting how students' beliefs about their abilities profoundly influence their learning outcomes.

Effort Praise and Self-efficacy

Effort praise, such as statements like "You're doing much better," can signal to students that they are making progress in their learning, thereby raising their self-efficacy. This type of praise communicates to students how their abilities are perceived by the teacher (Weiner et al., 1983). However, when students perceive a task as easy, praise that includes effort information (e.g., "That's good. You've been working hard.") may inadvertently suggest low ability. Consequently, students who believe their teacher holds low expectations for them may begin to doubt their capabilities.

For students with LD, low self-efficacy can present a significant barrier to academic success. Past performance is considered the most significant predictor of self-efficacy; thus, students with LD who frequently encounter academic failures or challenges are likely to develop lower self-efficacy due to these past experiences (Hampton & Mason, 2003). In turn, special education students with low self-efficacy may be less inclined to attempt challenging tasks and less likely to persist until they achieve success. This pattern can reinforce negative perceptions that students with LD have about their academic abilities.

Furthermore, students with LD often dedicate significantly more time and effort to achieve the same results as their typical peers. When these students observe that they must exert extra effort, it can lead to a diminished sense of self-efficacy (Bergen, 2013). The combination of low self-efficacy and a learning disability creates a "dangerous dynamic," as it is essential for these students to possess increased perseverance to meet the same academic standards as their peers (Bergen, 2013).

Fong et al. (2021) highlight the impact of various types of feedback, particularly effort-based praise, on students' motivation and self-efficacy. Their study suggests that praise focused on effort can significantly enhance self-efficacy by reinforcing the idea that success is achieved through hard work. This underscores the importance of carefully considering the type of praise educators provide, particularly for students with LD, as it can play a crucial role in shaping their self-perceptions and academic outcomes.

Effort Praise and Mindset

Hartmann (2013) suggested that students with LD tend to exhibit a more fixed mindset compared to their typical peers. Those requiring special education assistance for specific LD often do not achieve with the same propensity as their peers and are more accustomed to receiving failing or otherwise unacceptable grades. When educators or parents emphasise that students are measured by their accomplishments, these students may also infer that they are defined by their failures. Consequently, they tend to focus more on performance outcomes than on the learning process itself. The manner in which feedback and praise are delivered in the classroom significantly influences the type of mindset students develop. Research by Mueller and Dweck (1998) indicates that praising students for their efforts rather than merely highlighting their performance or asking questions about their thinking can foster resilience and persistence. Specifically, when the effort is praised, it suggests that ability can be improved, encouraging students to embrace challenges and cultivate "grit" (Mueller & Dweck, 1998). In contrast, Dweck (2006) found that when teachers and parents praise intelligence. For example, saying "You're so smart" instead of the effort invested in learning, students' motivation and overall performance suffer. Although such compliments provide a temporary confidence boost, they often leave students unprepared to cope with more challenging tasks, leading them to doubt their abilities when faced with difficulties.

By emphasising effort and perseverance, educators can help students realise that they have control over their success. Praising the learning effort, the strategies employed and encouraging students to challenge themselves can lead to increased effort, persistence and resilience. In this regard, responding to intelligence or merely celebrating task completion does not equip students to move forward after encountering failure. Dweck (2006) found that effort praise from teachers and parents motivates children more effectively than ability praise. This focus on effort helps students understand the effective strategies they have used and reinforces the importance of their efforts, even in the face of mistakes. Such an approach builds resilience and encourages students to strive for their goals rather than give up. Additionally, research indicates that a growth mindset, nurtured through effort-based praise, fosters greater school engagement and enhances academic performance. This shift in students' beliefs about their learning and abilities is essential for cultivating a growth mindset (Zeng et al., 2016). Furthermore, Mercer and Ryan (2022) investigated how praise and feedback, particularly effort-based praise, influence language learners' self-perceptions and motivation. Their findings suggest that this type of praise enhances learners' willingness to participate in speaking activities and helps them persevere in the face of challenges, ultimately leading to improved language proficiency.

Although substantial studies have been conducted on self-efficacy and mindset, gaps remain in the literature. First, there is a significant lack of baseline data on the self-efficacy and mindset of typically developing students in the Chinese context, which is necessary for comparison with students who have LD. Such data are essential for evaluating the performance of both typically developing students and those with Difficulties before

further investigating the effects of praise. Second, there is a notable deficiency in research specifically focusing on the use of effort praise to support students with LD, as well as its effects on their self-efficacy and mindset. By examining the effect of effort praise on self-efficacy, mindset and English-speaking proficiency among students with LD, this study aims to illuminate effective strategies for supporting these students within the educational context of China.

Aim

This study aimed to examine the effects of effort praise on self-efficacy, mindset, and English-speaking proficiency of students with LD in an after-school program in China compared to students without LD.

Research Objectives

This research will address the following research objectives:

1. To examine the differences in self-efficacy, growth mindset and English-speaking proficiency between a student with LD and students without LD.
2. To examine the effect of effort praise on self-efficacy, growth mindset and English-speaking proficiency quantitatively.
3. To examine the effect of effort praise on self-efficacy, growth mindset and English-speaking proficiency qualitatively.

METHODOLOGY

Research Design

Three research designs were employed in this study across two different phases. First, a quantitative, cross-sectional study was conducted to investigate the self-efficacy and growth mindset of students without LD within the context of after-school language enrichment classes. Students without LD were also known as "typically developing students" refer to students who exhibit developmental milestones and behaviours within the expected range for their age, without significant delays or impairments in areas such as learning. This group served as a comparative benchmark for student with LD. By comparing these two groups, critical differences in the self-efficacy and growth mindset can be determined, highlighting the specific areas where students with LD deviate from the typical developing students. The data was collected through online survey using a whole cluster sampling method to recruit participants. Second, a single case study using mixed methods was carried out to conduct an in-depth exploration of the unique experiences of one student with LD within the same after-school language enrichment classes. This case study provided valuable insights

into how effort praise influences the student's self-efficacy, growth mindset, and English-speaking proficiency over time. A mixed method was used in the case study involving both tests and semi-structured interviews.

Participants

A small-scale after-school language enrichment centre in Nanchang, the capital of Jiangxi province in Southeast China, was invited to participate in this study. The centre had five teachers and 178 students aged 7 to 12 years. Among these students, 156 were typically developing, while 22 had varying degrees of LD. In the cross-sectional study, all typically developing students were invited to participate; however, only 79 students aged 8 to 12 years volunteered to complete an online survey using self-efficacy and growth mindset scales. The demographic data of the participants are shown in Table 1.

For the single case study, one 10-year-old male student with LD, anonymously referred to as Mike, was selected using purposive sampling. The criteria for selecting this case-study participant included:

1. Exhibiting behavioural issues, such as difficulty sitting still and paying attention in the classroom.
2. Facing learning challenges, including avoidance of learning activities and working memory problems, as reported by the centre's teachers.

Table 1. Participants' demographic

Variables	Number (*n*)	%
Gender		
Male	41	51.8
Female	38	48.2
Age		
10 years old	28	35.4
11 years old	51	64.6

Instruments

In Phase 1, three instruments were used. The quantitative measures included two translated tools: the Self-Efficacy Scale (Schwarzer & Jerusalem, 1995) and the Growth Mindset Scale (Muradoglu et al., 2022), as well as a self-developed English-Speaking Proficiency Test. These tools were administered to both the 79 typically developing students and the student with LD to compare their performance. Additionally, a qualitative measure, in the form of an interview, was conducted with the student with LD before the implementation of effort praise. In Phase 2, the same three quantitative measures, which were the Self-

Efficacy Scale (Schwarzer & Jerusalem, 1995), the Growth Mindset Scale (Muradoglu et al., 2022), English-Speaking Proficiency Test, along with an interview, were administered again to the student with LD after the effort praise intervention. This phase aimed to assess changes in the student's self-efficacy, growth mindset, and English-speaking proficiency as a result of the intervention.

Self-efficacy scale

The survey consists of three parts, which were personal information, self-efficacy scale and growth mindset scale as follows: Part A - Personal Information: This section contains 10 questions to gather basic personal details, such as name and age. Part B - Self-Efficacy Scale: This scale includes 10 items designed to assess students' perceived self-efficacy, with statements like "I can get teacher's help when I get stuck on English-speaking practice." Responses are measured on a 4-point Likert scale ranging from 1 (Not at all true) to 4 (Exactly true). Developed by Schwarzer and Jerusalem (1995), the scale aims to evaluate general self-efficacy, predicting coping strategies and adaptation to stress. It has shown strong reliability, with Cronbach's alpha ranging from 0.76 to 0.90 across 23 nations. The tool was translated using a back-translation procedure.

Growth mindset scale

This section utilises vignettes designed by Muradoglu et al. (2022) to assess students' growth mindset. The teacher presents scenarios about children with low abilities in spelling and drawing, followed by questions to evaluate students' beliefs about the stability and malleability of these abilities. For example, students are asked if a character who struggles with spelling will always be poor at it or if their abilities can improve with practice. Responses to each of the four questions (two questions for each vignette) are scored on a scale from 0 to 1, where higher scores indicate a stronger growth mindset. Similarly, the tool was translated using a back-translation procedure.

English-speaking proficiency test

A speaking proficiency rubric was developed based on learning requirements and the syllabus, encompassing four dimensions: fluency, vocabulary, pronunciation, and body language. The assessment employs a 25-point Likert scale to evaluate mastery levels: 0–10 = Does Not Meet Expectations; 11–15 = Almost Meets Expectations; 16–20 = Meets Expectations; 21–25 = Exceeds Expectations. The rubric was validated by an English language teacher and a special education lecturer, with 5 years and 12 years of teaching experience, respectively. The speaking presentation tests were conducted both before and after the implementation of teaching, with each test lasting 10 minutes. Two examiners, who were colleagues of the researcher, assessed the student's English-speaking proficiency using the speaking proficiency rubric based on the established criteria.

Interview Questions

Semi-structured interviews were conducted to explore students' learning experiences. Seven questions were asked before the teaching intervention, and nine questions were asked afterward. The pre-intervention questions were categorised into self-assessment, motivation methods and praise effects. Q1 addressed the student's self-assessment, Q2 and Q3 focused on the student's perspective on motivation in class, while Q4 to Q7 examined the student's feedback on praise. Similarly, the post-intervention questions were categorised into self-assessment, motivation methods and praise effects. Q8 to Q11 focused on the student's self-assessment, Q12 and Q13 on motivation, and Q14 to Q16 on praise feedback. To ensure validity, all questions were aligned with the research objectives and validated by the English language teacher and the special education lecturer, as mentioned above.

Data Collection

During Phase 1 where before the teaching intervention began, research approval was obtained from both the university and the after-school education institution. A consent form was sent to the parents of the case study student. Once consent was secured, on the first day, 80 students (79 without LD and 1 with LD) completed the Self-Efficacy Scale (Schwarzer & Jerusalem, 1995) and Growth Mindset Scale (Muradoglu et al., 2022). Additionally, The English-Speaking Proficiency Test was used to assess the speaking proficiency of the student with LD, and a semi-structured interview was conducted to understand his feelings about learning. The interviewer, a researcher colleague, facilitated the interview to minimise bias.

During Phase 2 which was the 12-week teaching intervention, the researcher implemented the effort praise teaching strategy across 24 lessons (two per week), held on Tuesdays and Sundays. Each class lasted from 4:00 p.m. to 5:30 p.m. on Tuesdays and from 2:00 p.m. to 3:30 p.m. on Sundays, with 30 minutes of each session recorded to observe the frequency of effort praise. Various forms of effort praise were used depending on the activity (e.g., "Wow, you remembered the difficult word through your effort!"). The classroom teacher used effort praise during teaching over the 3-month of 58 research period. This included: (1) giving feedback appropriately, (2) praising the effort and progress, and (3) setting suitable task and give positive praise on effort. The examples of effort praises included "Wow, you can remember the difficult word though your effort. Super!", "You speak fluent after long practicing, well done!". The teaching journals and lesson excerpts were recorded by the first author. After the 12-week intervention, data collection was repeated. The Self-Efficacy Scale, Growth Mindset Scale, and English-Speaking Proficiency Test were conducted

again. A semi-structured interview was also held to gauge students' feelings about their learning experiences, with the same colleague conducting the interview to reduce bias.

RESULTS

To examine the differences in self-efficacy, growth mindset and English-speaking proficiency between a student with LD and students without LD, the means of self-efficacy, growth mindset and English-speaking proficiency were first analysed for both groups. The two sets of data were then compared.

Self-Efficacy of Students

Table 2 presents the self-efficacy results for students without LD and Mike. The analysis reveals that the mean scores for the 10 items range from 3.53 to 3.86 on a 4-point Likert scale, indicating a high level of self-efficacy. Notably, item SE 8 (I can live up to what my teachers and parents expect of me) received the highest mean score of M = 3.86, SD = 0.35, while item SE 10 (I can express my opinions when other classmates disagree with me) scored M = 3.84, SD = 0.46. These items reflect the students' self-efficacy regarding the expectations and opinions of important figures in their lives, such as parents and teachers. Conversely, the lowest scores were observed for item SE 6 (I like to learn other skills during my leisure time) with a mean of $M = 3.58$, $SD = 0.76$, and item SE 7 (I can resist peer pressure to achieve a higher score in English Speaking) with a mean of $M = 3.53$, $SD = 0.99$. These lower scores indicate that students exhibited less self-efficacy in relation to pursuing additional skills or resisting peer pressure.

The data indicates that Mike demonstrates higher self-efficacy in item SE 4 (I like to learn all subjects in school), item SE 6 (I like to learn other skills during my leisure time), and item SE 7 (I can resist peer pressure to achieve a higher score in English speaking), all scoring 3. These items suggest that he is motivated to engage in activities that interest him and is less concerned about his peers' performance. In contrast, he received lower scores on item SE 2 (If the environment is noisy to practice English Speaking, I will try to find a quiet place to practice) and item SE 9 (I like to talk with others in English). These items relate to problem-solving during learning activities and using English as a communication tool. The findings imply that he has lower self-efficacy in these two areas.

Table 2. Self-efficacy of students with and without LD

No.	Item	Mean (M)		SD
		With LD	Without LD	
1	I can get teacher's help when I get stuck on English Speaking practice.	2	3.73	0.64
2	If the environment is noisy to practice English Speaking, I will try to find a quiet place to practice.	1	3.77	0.55
3	It is easy for me to stick to my aims and accomplish my goals for English Speaking practice.	2	3.62	0.69
4	I like to learn all subjects in the school.	3	3.62	0.67
5	I could find different solutions to handle unforeseen situations when I practice English Speaking.	2	3.65	0.66
6	I like to learn other skills during my leisure time.	3	3.58	0.76
7	I can resist peer pressure to get a higher score in English Speaking.	3	3.53	0.99
8	I can live up to what my teachers and parents expect of me.	2	3.86	0.35
9	I like to talk with others in English.	1	3.57	0.75
10	I can express my opinions when other classmates disagree with me.	2	3.83	0.47
	Overall mean	2.1	3.67	

Growth Mindset of Students

Table 3 presents the results for both the instability of ability and malleability of ability among these students in the Growth Mindset Scale. The findings indicate that the overall mean for instability of ability is $M = 0.72$ and for malleability of ability is $M = 0.85$, both of which are at a high level. On the other hand, the findings show that the overall mean of instability of ability ($M = 0.50$) and malleability of ability ($M = 0.60$) of Mike are lower than those of the student's peers ($M = 0.72$ and $M = 0.85$).

Table 3. Growth mindset of students with and without LD

Element	Item	Mean (M)		SD
		With LD	Without LD	
Instability of ability	(1a) Chris isn't very good at spelling. He gets a lot of spelling questions wrong on his schoolwork. Will Chris always be not very good at spelling?	0.67	0.72	0.34
	(2a) Dora isn't very good at drawing. She cannot draw anything her teacher asks her to. Will Dora always be not very good at drawing?	0.33	0.71	0.34
	Overall mean	0.50	0.72	
Malleability of ability	(1b) When Chris was a little older, he moved to a school far away. He got to practice spelling a lot. Chris was at this school for a long time. When he left this school, was he good at spelling or not?	0.80	0.84	0.23
	(2b) When Dora was a little older, she moved to a school far away. She got to practice drawing a lot. Dora was at this school for a long time. When she left this school, was she good at drawing?	0.40	0.86	0.17
	Overall mean	0.60	0.85	

English Proficiency of the Student With and Without LD

As for the English-speaking proficiency skills, the skill was assessed using the English-Speaking Proficiency Rubric as shown in Table 4.

Table 4. English-speaking proficiency of the student with LD

Item	Mean
Fluency	10
Vocabulary	22
Pronunciation	10
Body language	8
Total score	50/100

Comparison of Self-efficacy, Growth Mindset and English-speaking Proficiency

Table 5 shows the result of the score gap of self-efficacy, growth mindset, and English-speaking proficiency between the students with learning difficulty and those without learning difficulty. The results highlight significant differences in self-efficacy, mindset, and English proficiency between students without LD and those with LD. Students without LD reported a mean self-efficacy score of 3.68, indicating a strong belief in their capabilities, while students with LD had a much lower mean score of 2.1. This suggests that students with LD may have significantly less confidence in their abilities compared to their peers. In terms of instability of ability, the mean score for students without LD was 0.72, while students with LD had a lower mean of 0.50. This indicates that students without LD perceive their abilities as more stable compared to students with LD, who may view their abilities as less consistent. On the other hand, in terms of the malleability of ability, the mean score for students without LD was 0.85, significantly higher than the 0.6 mean for students with LD. This suggests that students without LD are more likely to believe that their abilities can improve with effort and learning, while students with LD may have a less developed growth mindset regarding the malleability of their skills. As for English-speaking proficiency, the mean score for English-speaking proficiency was 92/100 for students without LD compared to 50/100 for the student with LD. This further emphasises that students without LD demonstrate better English-speaking proficiency than the student with LD. Overall, these comparisons indicate that students without LD tend to have higher self-efficacy, a more stable and malleable mindset, and better English-speaking proficiency than the student with LD.

Table 5. Comparison of self-efficacy, growth mindset and English-speaking proficiency for students with and without LD

Item	Sub-item	Mean of student with LD	Mean of student without LD
Self-efficacy	-	2.1	3.68
Mindset	Instability of ability	0.5	0.72
	Malleability of ability	0.6	0.85
English-speaking proficiency	-	50/100	92/100

To quantitatively and qualitatively examine the effect of effort praise on self-efficacy, growth mindset and English-speaking proficiency, the scores of the tests were compared for the student with LD before and after the teaching intervention. Table 6 shows the comparison of self-efficacy scores for Mike, the student with LD before and after the teaching intervention. The overall mean self-efficacy score was 2.1 before teaching intervention, and after intervention, the overall mean increased to 2.7. This increase indicates a general enhancement in the student's self-efficacy following the intervention.

Table 6. Self-efficacy of the student with LD before and after teaching intervention

No.	Item	Mean (M)	
		Before teaching intervention	After teaching intervention
1	I can get teacher's help when I get stuck on English-speaking practice.	2	4
2	If the environment is noisy to practice English speaking, I will try to find a quiet palce to practice.	1	2
3	It is easy for me to stick to my aims and accomplish my goals for Eanglish-speaking practice.	2	2
4	I like to learn other skills during my leisure time.	3	3
5	I could find different solutions to handle unforeseen situations when I practice English speaking.	2	2
6	I like to learn other skills during my leisure time.	3	3
7	I can resist peer pressure to get a higher score in English speaking.	3	3
8	I can live up to what my teachers and parents expect of me.	2	4
9	I like to talk with others in English.	1	2
10	I can express my opinions when other classmates disagree with me.	2	2
	Overall mean	2.1	2.7

Table 7 shows the comparison of mindset scores for the student with a LD before and after the teaching intervention. The results show some shifts in the student's scores, specifically regarding the instability and malleability of abilities as stipulated in the Growth Mindset Scale. Before intervention, the overall mean score for instability of ability was 0.50. After intervention, the overall mean increased to 0.67. Before intervention, the overall mean score for malleability of ability was 0.60, while after intervention, the overall mean increased to 0.80. The overall results show that the teaching intervention had a positive effect on the student's mindset. The overall belief in both the instability and malleability of abilities increased, suggesting that the student developed a stronger belief that abilities are not fixed and can improve with practice and effort.

Table 7. Mindset of a student with LD before and after teaching intervention

Element	Item	Mean (M)	
		Before teaching intervention	After teaching intervention
Instability of ability	(1a) Chris isn't very good at spelling. He gets a lot of spelling questions wrong on his schoolwork. Will Chris always be not very good at spelling?	0.67	0.67
	(2a) Dora isn't very good at drawing. She cannot draw anything her teacher asks her to. Will Dora always be not very good at drawing?	0.33	0.67
	Overall mean	0.50	0.67
Malleability of ability	(1b) When Chris was a little older, he moved to a school far away. He got to practice spelling a lot. Chris was at this school for a long time. When he left this school, was he good at spelling or not?	0.80	1.00
	(2b) When Dora was a little older, she moved to a school far away. She got to practice drawing a lot. Dora was at this school for a long time. When she left this school, was she good at drawing?	0.40	0.60
	Overall mean	0.60	0.80

English-speaking Profeciency of the Student with LD

The total score increased from 50 to 80, as shown in Table 8. This substantial increase highlights the overall effectiveness of the teaching intervention across various aspects of speaking.

Table 8. English-speaking proficiency of the student with LD before and after teaching intervention

Item	Mean	
	Before teaching intervention	After teaching intervention
Fluency	10	18
Vocabulary	22	20
Pronunciation	10	20
Body language	8	22
Total score	50	80

The findings of the interview are shown in Table 9 and reveal several insights about the student's self-assessment, motivation and the effects of praise during his English class before the implementation of teaching intervention. The student feels that he has participated in class by following the teacher's instructions, but he also mentions being scolded for losing focus. The student expresses motivation, particularly enjoying group activities. However, the student does not recall specific instances of positive feedback, implying that while praise was given, it may not have left a lasting impact. The student's response to praise is somewhat indifferent. He does not feel any strong emotional reaction when praised, and he expresses that he does not particularly care about it. While he acknowledges that praise has some positive impact, he cautions against excessive praise. Importantly, he does not believe that praise leads him to stop trying. Overall, his responses suggest that while he engages in class and appreciates group activities, his motivation is not heavily influenced by praise.

Table 9. Responses to the interview before implementation of teaching intervention

Interview focus	Interview question	Response from student
Self-assessment	Q1: In English-speaking class, do you think that you have properly participated? Why?	Yes, I followed the teacher's instruction, but my teacher scolded me when I was unfocused.
Motivation method	Q2: In English-speaking class, do you feel motivated to participate properly? Why?	Yes, I like group activities.
	Q3: In English-speaking class, could you think of your teacher's positive words about your performance? What are they?	Teacher praised me sometimes, but I cannot remember the details.

(continued on next page)

Interview focus	Interview question	Response from student
Praise effect	Q4: In English class, when the teacher praises your performance, how do you feel?	I don't have any special feelings.
	Q5: In English-speaking class, when the teacher praises you, do you care about it? What are your favourite praise statements?	I didn't care about the praise, and it doesn't affect me.
	Q6: Do those praise statements bring positive impacts to your next performance? Why?	Yes, but not too much praise in the classroom.
	Q7: Do those praise statements make you stop trying for the next performance because you think you've already done enough? Why?	No, because I still need to improve.

Table 10 shows the findings of the interview after the implementation of teaching intervention. The student enjoys English-speaking class, describing it as "interesting," which suggests a positive attitude toward the subject. He believes he made progress, citing improved scores and enhanced proficiency. He views praise as important, seeing it as both an affirmation of their efforts and a confidence booster. He also expresses belief in the value of hard work, indicating a strong sense of agency and determination to improve their English skills through effort. He recalls receiving a written praise card, showing that specific forms of recognition (such as tangible, written praise) are memorable and impactful for him. He understands that praise from the teacher was a result of both good performance and behaviour. Overall, he perceives praise as a positive reinforcement that boosts confidence, motivates continued effort, and helps him set higher goals for future performance.

Table 10. Responses to the interview after implementation of teaching intervention

Interview focus	Interview question	Response from student
Self-evaluation	Q8: Do you like English-speaking class?	Yes, it's interesting.
	Q9: Do you think you have made any progress in English-speaking proficiency?	Yes, I got a higher score and improved my English-speaking proficiency.
	Q10: Do you want to receive praise from your teacher?	Yes, it's an affirmation to me and can enhance my confidence.
	Q11: Do you think you can learn English speaking well through hard work?	Yes, I think I can make some improvement through my effort.

(continued on next page)

Interview focus	Interview question	Response from student
Motivation method	Q12: Do you notice any praise words in English-speaking class?	I remember the written card for praising.
	Q13: What was the reason the teacher praised you in English-speaking class?	Because I performed well and showed good behaviour.
Praise effect	Q14: How do you feel when the teacher praises you?	I feel happy when the teacher praises me for my effort.
	Q15: Do you perform better after the teacher praises you? Why?	Yes, it's an equal exchange. I should perform well, deserving the teacher's praise.
	Q16: Do those praise statements make you stop trying for the next performance because you think you've done enough? Why?	No, I still need to work hard to reach another higher goal.

DISCUSSION

This study aimed to investigate the effects of effort praise on self-efficacy, growth mindset and English-speaking proficiency in a student with LD in an after-school programme in China, in comparison with his peers without LD. The research sought to address three key objectives: first, to explore the differences in self-efficacy, growth mindset and English-speaking proficiency between students with and without LD; second, to quantitatively assess the impact of effort praise on these three variables; and third, to qualitatively evaluate how effort praise influences self-efficacy, mindset and English-speaking proficiency. The findings from this study provide valuable insights into how effort praise can contribute to the academic and psychological development of students with LD, with potential implications for inclusive education practices.

The main finding from the first research objective is that the self-efficacy, growth mindset and English-speaking ability of students without LD were all at high levels. These findings align with a study by Hwang et al. (2016) in Korea, which examined the relationship between students past academic performance and self-efficacy beliefs. The study found a mutual influence, where previous academic success had a greater impact on self-efficacy than self-efficacy had on academic achievement. Similarly, a study by Bai and Wang (2023) showed that growth mindset was a stronger predictor of English language learning success than self-efficacy or intrinsic motivation. In contrast, the findings of the student with a learning difficulty scored lower in self-efficacy, growth mindset and English-speaking proficiency compared to their peers. This student exhibited a fixed mindset and tended to give up easily when encountering problems, lacking confidence in meeting teachers'

and parents' expectations. His poor performance in English tests also reflected their lower self-efficacy and growth mindset. These results suggest that both self-efficacy and growth mindset can significantly impact academic performance, consistent with the findings of Motlagh et al. (2011), which showed that self-regulation, self-direction and self-evaluation are closely linked to academic success, with self-efficacy being a crucial factor in achieving academic goals. The results clearly indicate that the self-efficacy and growth mindset scores of the student with LD are lower than those of his peers without such challenges, as is his English proficiency. This aligns with Bandura's (1977) findings that students with LD frequently exhibit low self-efficacy, which correlates with higher rates of detentions, suspensions and poor grades. Students with low self-efficacy often struggle to advocate for themselves and tend to believe that their past performance predicts their future outcomes. This phenomenon is closely linked to the concept of a fixed mindset, as proposed by Dweck (2006).

The main finding from the second research objective demonstrates that effort praise can effectively enhance self-efficacy and foster a growth mindset in students with LD, leading to improvements in their English-speaking proficiency. Zarrinabadi and Rahimi (2021) similarly found that praise can positively influence students' emotions, potentially reducing anxiety, and highlights the need for further exploration of the relationship between effort beliefs and emotions. Fong et al. (2021) also supports this, emphasising the impact of various types of feedback, including effort-based praise, on student motivation and self-efficacy and suggesting that such praise reinforces the belief that success is driven by effort. Additionally, Zeng et al. (2022) found that effort-based praise encourages school engagement and improves academic outcomes by fostering a growth mindset. Mercer and Ryan (2022) examined its effects on language learners, discovering that it enhances self-beliefs, motivation and a willingness to engage in speaking activities, ultimately improving language proficiency. Collectively, these studies underscore the powerful role of praise in shaping students' learning experiences and emotional well-being, echoing the findings of the present study.

The main finding from the third research objective reveals that effort-based praise has a positive impact on self-efficacy, fosters a growth mindset and leads to improvements in English-speaking proficiency in students with LD. This is evident in students' increased motivation, confidence and engagement with language learning tasks, which in turn supports their progress in English proficiency. These findings align with the theoretical framework that positions effort-based praise as a key factor in developing self-efficacy and a growth mindset. The study also provides strong support for Bandura's (1977) Social Cognitive Theory, particularly the concept of self-efficacy. According to Bandura (1977), self-efficacy is shaped by mastery experiences and positive feedback which are the major determinant of motivation and behaviour.

CONCLUSION

The results of this study indicate that students with LD exhibit lower overall self-efficacy and growth mindset scores compared to their peers. Effort praise was found to positively impact the student, leading to improved scores in both self-efficacy and growth mindset and enhanced English-speaking proficiency. This highlights the crucial role of effort praise in enhancing these areas, as it has been shown to impact students with LD in this study positively. Therefore, it is essential for teachers to provide effort praise, which can significantly boost self-efficacy and foster a growth mindset in these students.

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