



## Application of growth mindset and comparison behaviors to EFL teaching

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### Abstract

Social comparison is believed to benefit learning and motivation. Contrary to this popular belief, the present study demonstrates that social comparison has more negative consequences for learners' achievement than self-comparison. The study participants were 75 university sophomores majoring in English in central Taiwan. The participants were divided into 2 groups. The social comparison group included 40 students, and the self-comparison group included 35 students. Students in the social comparison group were found to care more about performance goals relative to learning goals than students in the self-comparison group. After failure, the social comparison group displayed lower test persistence and poorer test performance than the self-comparison group. Furthermore, students in the social comparison group more frequently described ability as a fixed trait than students in the self-comparison group, who believed their ability to be subject to improvement. The findings offer valuable implications for how achievement can be improved in the Taiwanese English as a Foreign Language context.

**Keywords:** social comparisons, self-comparison, growth mindset, English as a foreign language (EFL)

### Introduction

Dweck (2008) <sup>[6]</sup> proposed the concepts of growth and fixed mindsets. Students' mindsets indicate how they perceive their abilities, which is associated with their learning motivation and achievement (Dweck, 2015) <sup>[6]</sup>. According to Dweck (2015) <sup>[6]</sup>, students with a growth mindset believe that their intelligence can be developed, whereas those with a fixed mindset believe that their intelligence is fixed. A growth mindset and its benefits may be fostered by focusing on the process of learning. In addition, a growth mindset involves making an effort, trying new strategies, and seeking input from others when necessary. Educators should adopt and model a growth mindset in their classroom practices. Individuals possess a mixture of fixed and growth mindsets, and the path to a growth mindset is worthwhile. The current study employed enhanced social comparison (defined in the present study as the use of words or behaviors by the instructor to intensify social comparison, such as praising high achievers or blaming low performers) to trigger a fixed mindset and enhanced self-comparison to promote a growth mindset. More precisely, this study proposes that teachers should encourage self-comparison in a manner that emphasizes the process of learning (effort and hard work). The present study focuses on how enhanced self-comparison may foster learning in the English as a Foreign Language (EFL) context.

This study was undertaken for several reasons. First, Dweck's studies focused on elementary and secondary students, whereas fewer studies regarding the growth mindset have been performed in higher education settings. In addition, cultural diversity may affect the effectiveness of the growth mindset. Moreover, no study has employed enhanced social comparison and enhanced self-comparison to promote fixed and growth mindsets, respectively. Furthermore, limited research has explored social comparison and self-comparison in the non-Western context. Finally, this study adds to a growing body of literature of theoretical and empirical analyses of the growth

mindset and academic achievement in EFL settings. This study aims to reveal practical implications and avenues for future research. The policy implications discussed herein may also be applicable to higher education in Taiwan in general.

Festinger proposed social comparison theory in 1954, which stated that people possess a desire to assess their own abilities through stable, accurate evaluations (Dijkstra *et al.*, 2008) <sup>[5]</sup>. Individuals tend to compare themselves with others who exhibit a specific similarity (Preckel *et al.*, 2008) <sup>[11]</sup>, which suggests that similarity is a critical determinant of comparison choice (Felicio & Miller, 1994) <sup>[8]</sup>. Therefore, in the academic setting, students usually compare themselves with their peers. Particularly, the classroom provides a source of social comparisons, where the system rewards individuals based on academic achievement, perceived teacher concern, and parental pressure (Dijkstra *et al.*, 2008) <sup>[5]</sup>. Students compare themselves with peers to protect, establish, or recapture a successful image (Tholander, 2011) <sup>[13]</sup>. Social comparison may influence students' learning, self-esteem, self-efficacy, self-concept, and subsequent academic achievement (Sung *et al.*, 2014) <sup>[12]</sup>.

Social comparison is a common response to learning in school. Whether in the classroom or after class, it is natural to evaluate individual achievement through comparison with others. Thus, social comparison has been used as a popular tool to maintain and develop students' academic achievement behaviors and motivation. Comparison with classmates, in particular, plays a role in students' perceptions of their ability and motivation to succeed. When students perform well on tests and examinations, comparison with peers causes them to form a positive academic concept. The learning motivation of some students may be increased to avoid losing to peers. In essence, outperforming others causes students to feel a sense of superiority, which in turn increases their learning motivation.

In general, teachers praise high achievers to provide examples for the class and consequently motivate low achievers. The more teachers label students as successful in their studies, the greater the students' enjoyment of and motivation for achievement, and the greater their influence on others. Teachers enhance social comparison by praising high achievers. Learning becomes a competition because of social comparison.

However, attributing student success to competition may have an undesired effect on students' overall achievement. Enhancing social comparison may have various negative effects when it leads high achievers to feel pressured to produce future high performance and when it leads low achievers to have feelings of self-despair. Although enhanced social comparison may have such effects on students, the focus of the present study is on the direct effects of social comparison on EFL students' goals and on their interpretation of subsequent achievement in English learning.

Enhanced social comparison may negatively affect student responses to achievement situations in two ways. Linking performance to competition may influence students by altering the attributions that they make for their performance and by changing their achievement goals.

First, enhanced social comparison may lead students to adopt achievement goals wherein outperforming others becomes their primary motivational aim. In other words, praising high achievers in front of the class may motivate them to prove that they are better than others by achieving high scores. Studies have determined that placing an emphasis on grades and verbal praise may lead students to assess their abilities based on academic achievement (Butler, 1987; 1988) [3].

This focus on competition can have negative consequences for students' emotions, behavior, and cognition. Students who strive to win may sacrifice potentially valuable learning opportunities if such opportunities may cause them to fall behind or if they do not ensure immediate achievement. In other words, students who subscribe to a competition view may reject opportunities to take on challenges and gain knowledge in favor of outperforming others. Moreover, emphasizing competition may lead to perceptions of helplessness in response to achievement setbacks.

Second, praising high achievers in front of the class may also directly cause students to attribute failure to fixed ability. Teachers who praise high achievers in front of the class may show students that outperforming others is a fixed or stable ability. Thus, if students have poor performance in the lesson, they may attribute their failures to the lack of ability. Enhanced social comparison reminds students that they should measure their success based on their performance relative to that of their peers. If they subsequently perform poorly, they may re-evaluate their ability based on this low achievement.

Because enhanced social comparison has negative consequences for students' achievement after failure, the present study proposes that self-comparison may result in improved resilience to setbacks. This study compared the goals and achievement behaviors of socially compared students with those of self-compared students. Self-comparison was chosen primarily because ego is the fundamental causal ascription for achievement outcomes. Self-comparison is relatively objective in contrast to peer

comparison, as the starting point is different for each individual. Furthermore, individuals can control their own progress and effort. Self-comparison is proposed to affect students in terms of both their attributions and their goals.

First, self-comparison may lead students to focus on the task and the possibilities of learning and improvement that a difficult task may offer. Because of enhanced self-comparison, students may feel comfortable concentrating on the development of their skills through the challenge of hard work or new material. Thus, students may orient themselves toward learning goals and may develop high achievement motivation (Nicholls, 1984) [10].

Second, self-compared students may learn to attribute their achievement to effort, which can vary in amount in contrast to a stable ability (Mueller & Dweck, 1998) [9]. Hence, they may consider poor performance to be indicative of a temporary lapse in effort rather than a failure (producing a negative sense of self-worth). Self-comparison may lead students to display more adaptive achievement behaviors following academic setbacks than socially compared students.

However, the results of research examining the effects of social comparison do not align with these proposals. For example, Bui and Pelham (1999) [2] stated that people tend to feel inspired by those who succeed. Buunk, Kuyper, and Van der Zee (2005) [4] also mentioned that individuals hope to achieve successful academic performance similar to that of the target in the future. The findings suggest that social comparison may sometimes have a positive effect on students' achievement motivation as well as their performance. However, focusing on the feedback's effects under conditions of success is only one angle for examining students' learning. Whether social comparison may lead to different student responses to academic setbacks remains uncertain. Moreover, previous studies have not explored the effects of social comparison versus self-comparison on students' academic goals and achievement attribution.

The procedures used in a previous study (Mueller & Dweck, 1998) [9] were applied to the current study, with slight modifications to distinguish between the effects of social comparison and self-comparison using various measures under conditions of both failure and success in EFL settings. This study assumes that socially compared students make more ability attributions for their academic setbacks than self-compared students, who prefer effort attributions. This study also assumes that socially compared students may believe their performance to be a reflection of their ability by choosing to engage in easier tasks and showing competition-oriented behaviors (e.g. seeking information about the scores of others). Furthermore, this study assumes that socially compared students exhibit lower persistence, less enjoyment, and a lower sense of self-worth after failure than self-compared students. Finally, this study assumes that social comparison may influence students' beliefs about and definitions of academic ability. Social comparison reflects academic ability measured against the performance of peers, leading students to define academic ability in terms of an uncontrollable, variable (varying according to the performance of others) trait. Instead, this study posits that self-comparison may lead students to focus on adaptable, motivational factors.

This pattern of competition goals, ability attributions, and feelings of helplessness in response to achievement setbacks

results from the premise that social comparison leads students to define their academic ability in terms of an uncontrollable, variable component. By contrast, self-comparison leads students to develop their academic ability by attributing success to effort and facing the challenge of hard work.

The procedures were designed to investigate possible explanations for the effects of social comparison and self-comparison. This study examined whether student responses are linked to their anticipation of future achievement as well as their definition of achievement. This study also investigated whether student responses are connected to their academic goals and achievement attributions.

### Methods

The participating students were 75 English-major sophomores studying in central Taiwan, 40 of whom were part of the social comparison group, and the remaining 35 were in the self-comparison group. Each group of students took a total of four English tests. Each test included 20 questions worth 5 points each, for a maximum possible score of 100 points. Only the students themselves and the instructor could see the test scores. The participants understood that the scores were neither made known to the public nor a part of their semester grades. Nevertheless, the instructor asked them to take the tests seriously to measure their English ability.

First, both groups of students were administered a 20-question English test through an online learning platform. The e-learning platform was a tool they habitually used to access course resources, take tests, and do homework in their regular courses, so they were familiar with the technology. The questions on the test corresponded with the Common European Framework of Reference (CEFR) descriptors for A2. Most of the students achieved high scores. Upon completion, the students in the social comparison group were encouraged by the instructor to strive for high performance and improve their rankings. By contrast, the students in the self-comparison group were encouraged by the instructor to make an effort and challenge themselves. The instructor used encouraging words for both groups of students (with different orientations, encouraging either social comparison or self-comparison) but did not provide any type of award. The two groups were then given the second test on the same online platform, but this time they could choose which English test to take. The first option contained 20 questions that were at a similar level to the first test (CEFR descriptors of A2). Therefore, they would almost certainly do well on this test. The alternative was a much more challenging and difficult test composed of 20 English questions with CEFR descriptors of B2, giving them the opportunity to think and learn. For the third test, the two groups were offered a truly challenging English test that was beyond their current abilities (questions with CEFR descriptors of C1). The students were told that they could choose to attempt the third test or they could choose to give up. Before the students made their decisions, the instructor emphasized the encouraging words (with different orientations, encouraging either social comparison or self-comparison) once again. For the fourth and final test, the two groups were given English questions with the same level of difficulty as the first test (CEFR descriptors of A2).

### Results and Discussion

For the first test, the average score of the social comparison group was 70.25 (SD = 10.86) points, whereas the self-comparison group had an average score of 65.43 (SD = 15.69) points. Preliminary analyses were conducted to examine the effect of students' task ability on their responses. For the second test, 75% of the students in the social comparison group ( $n = 30$ ) chose the easier test, whereas 54% of the self-comparison group students ( $n = 19$ ) chose the more challenging test. This finding suggests that the students in the social comparison group tended to not attempt tasks that lead to lower performance in comparison with the high performance of others, so they chose the safer, easier option. Instead of challenging themselves with the tougher set of English questions, many students in the social comparison group chose the option that would support the self-belief that their performance was higher than that of others. As a result, they limited the growth of their English learning. The self-comparison group students received a very different message. They heard that their effort and growth mattered. Instead of thinking that mistakes would indicate failure, approximately half chose to look at challenges as opportunities to grow and learn.

For the third test, 35% of the social comparison group students ( $n = 14$ ) chose not to attempt the test, whereas only 26% of the self-comparison group students ( $n = 9$ ) declined to attempt it. In addition, of those from the social comparison group who gave up on the third test, 93% ( $n = 13$ ) had chosen the easier option in the second test, whereas 67% of the students in the self-comparison group who gave up on the third test ( $n = 6$ ) had chosen the easier option for the second test. For the fourth test, the average score of the social comparison group students was 90.66 points, whereas the self-comparison group students scored 90 points on average. Compared with the first test, the students in the social comparison group improved their scores by an average of 29%, whereas the students in the self-comparison group improved their scores on average by 38%.

The results of the study were explained to both groups of students after the experiment, so that the participants could see how comparison behaviors affected their academic goals and achievement. With the publication of this study, the author hopes that educators can be made aware of their role as comparison facilitators. Especially given that only encouraging words were used in the current study and still resulted in such a meaningful difference (also considering that course instructors can have an even greater influence beyond saying encouraging words through actions such as providing rewards, blaming low achievers, etc.), the findings illustrate the influence of course instructors and imply that teachers should choose their words and behaviors carefully when conveying messages in the classroom.

### Implications and Future Research

The study findings provide evidence for the differential effects of social comparison and self-comparison on students' beliefs and achievement behaviors. When social comparison was emphasized, the students chose tasks that allowed them to demonstrate high performance, whereas when self-comparison was emphasized, the students selected tasks that expanded their learning. The students who focused on social comparison preferred to seek information on the performance of others rather than to

learn new things and solve problems, even when the knowledge might have a positive influence on their future performance. The students who focused on self-comparison demonstrated continued interest in learning and valued learning opportunities. The students in the social comparison group appeared to measure their academic competence relative to the performance of others. Thus, they were afraid to accept challenges that might involve facing failure. They were likely to attribute failure to low ability, causing embarrassment. This belief led the students in the social comparison group to exhibit negative responses in the form of reduced task persistence. Furthermore, focusing on social comparison led the students to demonstrate tunnel vision, wherein they concentrated their attention on the performance of their classmates and neglected other facets of the experience, such as the fun of learning.

Several possible explanations for the findings are as follows. First, social comparison may have led the students to value outperforming others, hold higher expectations for their future test results, or fear a disappointing performance more so than self-comparison. These expectations may have then caused the students in the social comparison group to feel more discouraged or less motivated after setbacks than their counterparts in the self-comparison group. Second, it is not surprising that the students exposed to social comparison instruction, which emphasized proving their ability through high academic achievement, were likely to fall apart when they faced performance failure. By contrast, the students exposed to self-comparison instruction paid more attention to learning than performance and were consequently less likely to respond negatively when they encountered temporary low performance.

Some comparison among students is likely unavoidable, but the words and behaviors of instructors can strengthen or downplay competition. As “achievement first” is generally valued in Eastern culture, teachers may sometimes be inclined to praise high achievers and encourage others to emulate their success. However, although teachers may mean well with their judgments, expectations, or praise for success and criticism for failure, their effect is multifaceted. If “result” is the most important aspect of learning, students may miss out on the fun in the learning process, develop low self-esteem and a fear of failure, and forget that each individual has strengths and weaknesses. Thus, the current study suggests that teachers should encourage self-comparison in a manner that emphasizes the process of learning, thereby fostering a growth mindset in their students. The author believes that people may try to understand individual differences (such as the efforts of others) without necessarily comparing themselves with high achievers. Learners should focus on themselves and appreciate who they are as individuals. As Ernest Hemingway once said, “true nobility is in being superior to your previous self.”

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