

## THE IMPACT OF MOTIVATIONAL QUOTES IN INSTAGRAM REELS ON MIRROR NEURON ACTIVATION AND COMMUNICATION: A STUDY ON COLLEGE STUDENTS

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### Abstract

This study investigates the impact of motivational quotes in Instagram Reels on mirror neuron activation and students' communication skills. Utilizing a quantitative approach, a survey was conducted with 30 English Literature students from Medan State University. The findings reveal that motivational quotes significantly affect students' psychological and communicative behavior. A majority of respondents 96.7% reported a shift in perspective after viewing motivational content, and 90% experienced an emotional uplift. Moreover, 93.3% felt inspired to take action, while 83.3% expressed increased confidence in voicing their opinions. Regarding communication, 80% of respondents believed motivational quotes had a long-term positive impact, and the same proportion shared such content with peers or family. Although only 6.7% frequently used motivational quotes in daily conversation, most respondents acknowledged their influence on empathy, confidence, and perspective. These findings suggest that while motivational quotes may not directly transform verbal expression, they play a substantial role in fostering a positive mindset and enhancing internal readiness for communication through mirror neuron stimulation.

**Keywords:** Mirror Neuron Activation, Communication Skills.

### INTRODUCTION

Instagram Reels has become one of the most popular social media features among college students, functioning not only as a platform for entertainment but also as a source of daily inspiration and informal learning. Among the many types of content that circulate on Reels, motivational quotes presented in short video formats have gained significant attention. These brief yet impactful messages are designed to evoke positive emotions, stimulate cognitive responses, and encourage personal growth. For university students who often face academic stress, social anxiety, or self-doubt, these motivational snippets

can offer momentary encouragement and possibly influence long-term behavior.

In the context of communication, particularly among young adults in academic settings, the role of mirror neurons is vital. Mirror neurons are specialized cells in the brain that activate both when an individual performs an action and when they observe someone else performing the same action. This neurological mechanism enables individuals to empathize, imitate, and internalize behaviors, emotions, and expressions, thereby shaping how they interact with others. Digital content, especially motivational Reels, may activate these mirror neurons in ways that enhance one's motivation, confidence, and readiness to engage in social interactions.

This study seeks to investigate how motivational quotes in Instagram Reels influence the activation of mirror neurons and how this, in turn, impacts the communication skills of university students. It explores whether frequent exposure to motivational content leads to an improvement in self-confidence, a stronger willingness to express opinions, and more active participation in academic discussions. Furthermore, the study aims to examine whether such content creates measurable shifts in students' digital and face-to-face interaction patterns. By analyzing both the psychological and behavioral responses of students who consume motivational quotes, this research intends to provide deeper insights into how digital motivation can affect social behavior, particularly in communication. The ultimate goal is to understand how social media, when used intentionally, can support the development of more confident and communicative individuals within the academic environment.

## **LITERATURE REVIEW**

### **Mirror Neuron Activation**

Mirror neurons are a group of neurons that become active when an individual performs an action or observes someone else performing the same action. The activation of mirror neurons plays a crucial role in social communication, empathy, and both verbal and nonverbal interactions (Termina, 2017).

Gallese and Lakoff (2005) found that mirror neurons are not only involved in mimicking physical movements but also in understanding language and emotions. This process allows individuals to subconsciously internalize observed messages, including those in digital contexts such as social media.

Research by Dickerson et al. (2017) indicates that while mirror neurons can be activated through digital interaction, their effectiveness in facilitating social communication is often lower than in face-to-face interaction. However, in the context of motivation, exposure to inspirational quotes on digital media can stimulate mirror neuron activity, foster positive thinking patterns, and enhance self-confidence in communication.

Li et al. (2015), using EEG studies, observed mirror neuron activity during symbolic communication and found that processing abstract messages can trigger similar neural responses to those in direct communication. This suggests that individuals who regularly

consume motivational content on digital media may experience changes in their communication patterns and social skills.

### **Communication Skills**

Communication skills are a crucial component in both social and academic interactions. According to Mayer (2011), effective communication depends on a combination of verbal skills, nonverbal cues, and social understanding. In the digital age, communication patterns are changing due to a shift from face-to-face interaction to text- and video-based media.

Research by Shete and Garkal (2016) shows that mirror neuron activation is related to the development of communication skills, particularly in interpreting nonverbal signals such as facial expressions and voice intonation. Therefore, exposure to inspirational content on digital media may assist individuals in developing speaking skills and confidence.

Additionally, Zubiel-Kasprowicz and Waligórska (2016) emphasize how storytelling in digital communication can strengthen the emotional connection between the speaker and the audience. This is relevant in the context of motivational quotes on Instagram Reels, where strong, emotional messages can influence how individuals speak and engage with others.

### **METHODS**

This study applied qualitative methods, which are commonly used to explore social phenomena by understanding individuals' experiences, perspectives, and social contexts in depth. According to Creswell & Poth (2018), qualitative research is a means for exploring and understanding the meaning individuals or groups ascribe to a social or human problem. It involves emerging questions and procedures, data typically collected in the participant's setting, data analysis that is inductive and builds from particulars to general themes, and the researcher making interpretations of the meaning of the data. Denzin and Lincoln (2011) define qualitative research as a situated activity that locates the observer in the world and consists of a set of interpretive, material practices that make the world visible. These practices transform the world by turning it into a series of representations, including field notes, interviews, conversations, photographs, recordings, and memos to the self.

According to Moleong (2017), qualitative research is a type of research that aims to understand phenomena experienced by research subjects such as behavior, perception, motivation, action, and others holistically, and by means of descriptions in the form of words and language, in a specific natural context and by utilizing various natural methods. Based on these views, it can be concluded that qualitative methods emphasize understanding the depth and complexity of social interactions and human behavior through non-numerical data. This method is especially effective in revealing subtle

processes and meanings that cannot be captured through quantitative measurements.

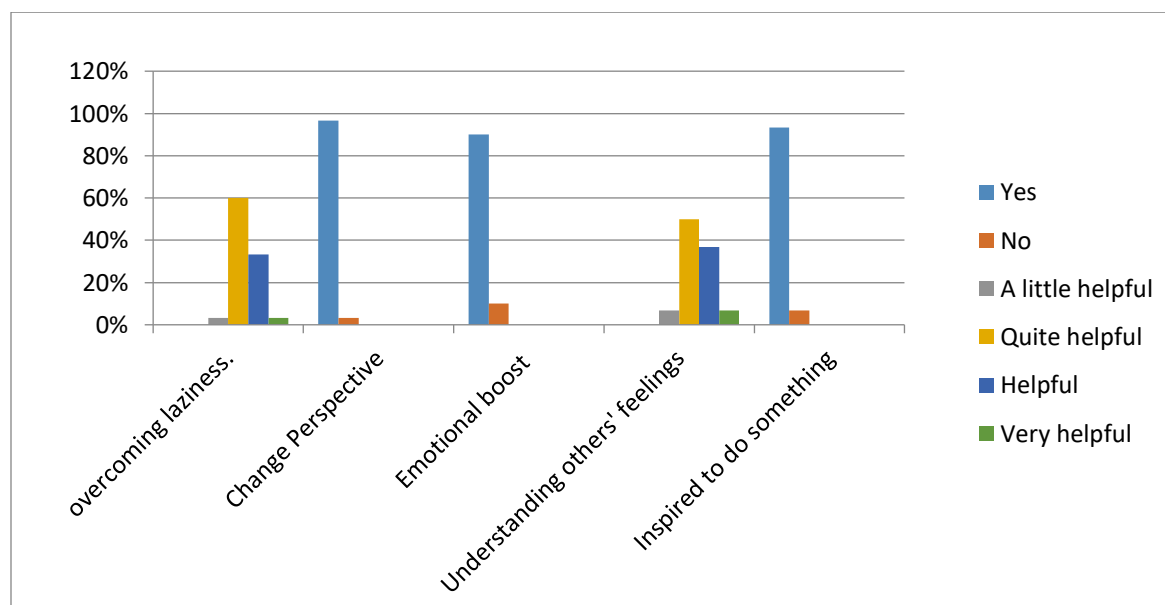
In this study, the data collection technique used was the in-depth interview method. In-depth interviews are a common qualitative data collection technique used to gain detailed information from participants about their thoughts, feelings, and experiences (DiCicco-Bloom & Crabtree, 2006). This method allows for flexibility in question delivery, enabling the researcher to probe further based on participants' responses and uncover underlying meanings.

The purpose of this study is to analyze the impact of motivational quotes in Instagram Reels on mirror neuron activation in college students. This study also aims to explore the relationship between motivational content consumption and students' communication skills and evaluate the changes in their communication patterns due to exposure to motivational digital content. The sample in this study were 30 English students at State University of Medan. All students were invited to fill in the questionnaire so that the research results reflect the opinions of the English students.

## RESULT AND DISCUSSION

### Result

This study examined the impact of motivational quotes in Instagram Reels on mirror neuron activation and communication skills of university students. Based on data obtained from 30 respondents, a strong relationship was found between exposure to motivational quotes and neurological responses and changes in communication patterns.



**Figure 1. Diagram of Motivational Quotes on Mirror Neuron Activation**

The data showed a correlation between motivational quotes on mirror neuron activation:

The majority of respondents 60% rated the motivational quotes as moderately

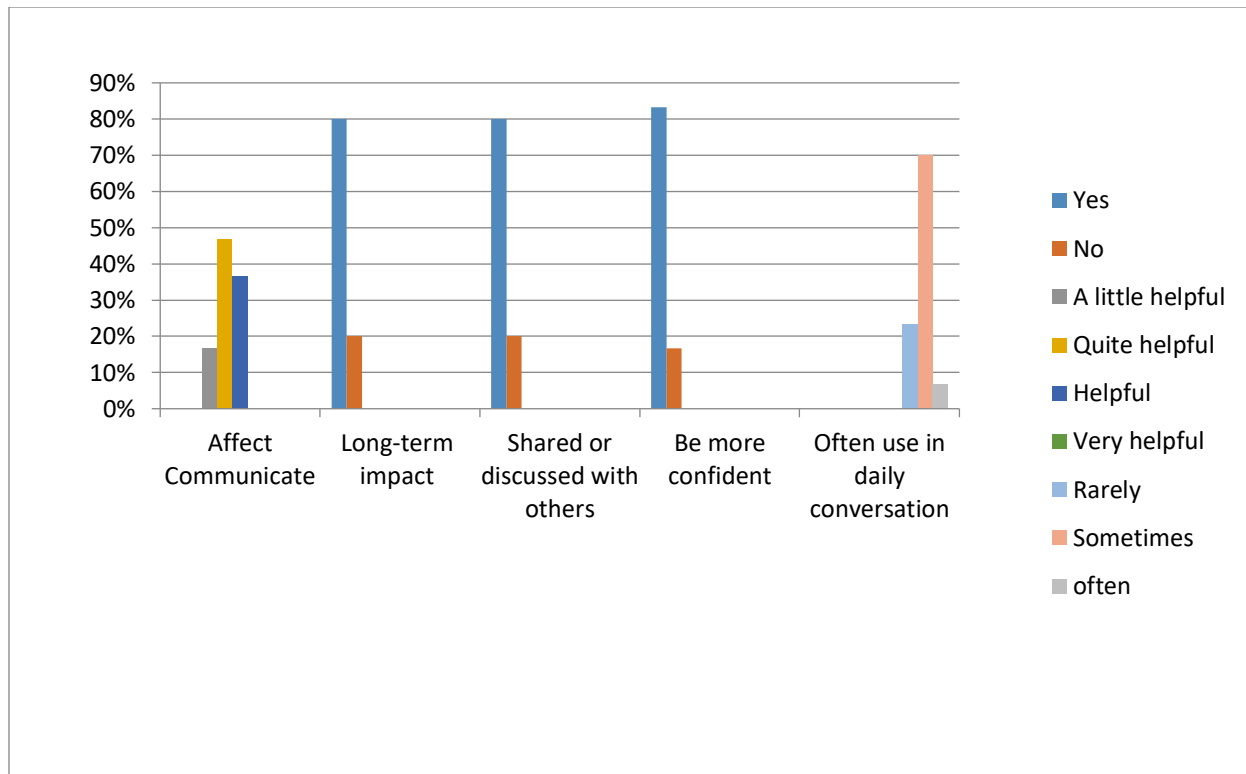
helpful (scale 3 out of 5) in overcoming laziness or lack of enthusiasm. Another proportion of respondents 33.3% found the motivational quotes quite helpful (scale 4). Meanwhile, a smaller proportion of respondents gave lower ratings, with 3.3% choosing scale 2 and 3.3% choosing scale 5. No respondents found the motivational quotes not at all helpful (scale 1). Overall, this data suggests that motivational quotes are generally perceived to have a positive impact in combating laziness and increasing enthusiasm, although the degree of effectiveness varies between individuals.

Almost all respondents, 96.7%, stated that the motivational quotes they read on Instagram Reels had changed their perspective on a situation. Only a small percentage of respondents, 3.3%, answered that the motivational quotes never influenced their views. This finding indicates that motivational quotes on the Instagram Reels platform have a very significant potential to influence the way a person views and understands a problem or situation. In other words, the quotes seem to be able to provide a new and constructive point of view for a large majority of its users.

Based on the data collected, a large majority of respondents, 90%, reported having felt a strong emotional boost after reading certain motivational quotes. Only a small percentage, 10%, did not experience a significant emotional boost after reading these quotes. These results suggest that motivational quotes have great potential to evoke and reinforce positive emotions for most individuals who read them. Although there was a small proportion who did not feel a strong emotional impact, the effectiveness of motivational quotes in providing an emotional boost appears to be quite dominant.

The survey results showed that the majority of respondents, 50%, often felt that they understood other people's feelings or experiences after reading motivational quotes. Another sizeable portion 36.7% felt that they sometimes experienced the same thing. Meanwhile, a small proportion of respondents answered always 6.7%, rarely 6.7%, and never 0% felt emotional understanding after reading motivational quotes. Overall, this data indicates that motivational quotes have the potential to increase empathy and understanding of others' feelings for most readers, although the degree of influence varies.

A total of 93.3% of respondents stated that they have felt inspired to do something after reading motivational quotes on Instagram Reels. This shows that the motivational quotes on the platform have a significant impact in generating passion and drive in most of its users. Only a small percentage of respondents, 6.7%, did not feel any impact or inspiration after reading motivational quotes on Instagram Reels. Nonetheless, the large majority demonstrated the effectiveness of the quotes for many people. So overall, the results of this survey indicate that the motivational quotes on Instagram Reels have a positive influence and are able to provide inspiration to most of its users. While there is a small minority who do not feel the impact, the popularity and reach of Instagram Reels makes it a potential platform for spreading motivational messages.



**Figure 2: Diagram of Motivational Quotes on Communication Skills**

The data showed a correlation between motivational quotes on communication skills:

Most of the respondents 80% thought that the motivational quotes on Instagram Reels had a Regarding whether respondents think motivational quotes on Instagram Reels have a long-term impact on their communication skills, most of the respondents, 80%, think that motivational quotes on Instagram Reels have a long-term impact on their communication skills. Meanwhile, 20% of the respondents were not sure or did not feel any such long-term impact. This result shows that the majority of users believe that continuous exposure to motivational quotes through platforms such as Instagram Reels can make a positive contribution to the development of their communication skills.

Regarding whether respondents have shared or discussed motivational quotes with friends or family, 80% of respondents stated that they have shared or discussed motivational quotes with their friends or family. Meanwhile, 20% of respondents answered that they have never done so. This shows that motivational quotes are not only for personal consumption, but are also often a topic of conversation and sharing among respondents' social circles. In other words, these quotes have a tendency to be shared and discussed with those closest to them.

Regarding how much influence motivational quotes have on the way respondents communicate with others on a scale of 1 to 5, the majority of respondents 46.7% considered that motivational quotes have a considerable influence (scale 3 out of 5) on the way they communicate with others. Another 36.7% felt a greater influence (scale 4).

Meanwhile, a smaller proportion of respondents felt a lesser influence, with 16.7% choosing a scale of 2. No respondents felt the motivational quotes had no effect at all (scale 1) or had a very great effect (scale 5) on the way they communicate. Overall, this data suggests that motivational quotes tend to exert a moderate to considerable influence in shaping the communication style of most individuals.

Regarding whether reading motivational quotes helped respondents become more confident in expressing their opinions, most respondents 83.3% felt that reading motivational quotes helped them become more confident in expressing their opinions. Meanwhile, a small proportion of respondents 16.7% did not feel any increase in confidence in expressing their opinions after reading the quotes. These results show that motivational quotes have a positive influence on building confidence in expressing views for the majority of individuals. Although a small number did not feel the impact, overall, reading motivational quotes seems to contribute to courage in expression.

Regarding the frequency of using or quoting motivational quotes in daily conversations, most respondents 70% rarely used or quoted motivational quotes in their daily conversations. Another 23.3% do so sometimes. Only a small number of respondents (6.7%) often used motivational quotes in their verbal interactions, and no respondents answered always. This suggests that while motivational quotes may have a personal impact, their active use in everyday conversation tends to be limited to a small number of individuals.

No	Initial	Impact the Motivational Quotes	Individual relevance
1.	DAP	Overcoming laziness	I find motivational quotes quite helpful in overcoming laziness, especially in the morning. Reading them gives me a push to start my day, even though the effect doesn't always last long.
2.	JPS	Change perspective	Some motivational quotes I've seen on Instagram Reels really changed the way I see failure. I used to give up easily, but now I see it more as part of the learning process.
3.	PA	Emotional boost	Quotes about struggle and bravery often give me a strong emotional boost. Sometimes I feel like the words truly understand me, and that helps me get through difficult times.
4.	GSP	Understanding others' feelings	Motivational quotes make me more aware that everyone has their own battles. I've become more empathetic,

			especially when dealing with friends who are under pressure.
5.	MFN	Inspired to do something	I feel very inspired after seeing quotes about stepping out of my comfort zone. It pushes me to try new things, like joining a workshop or speaking in front of a crowd.
6.	LJS	Long term impact & Affect communication	Motivational quotes have shaped the way I communicate. I've become more confident in expressing my opinions and have developed a more positive mindset over time.
7.	JH	Shares or discussed with others	When I come across a quote that really hits me, I usually share it with friends or family. It often leads to deep conversations about life and personal experiences
8.	RS	Affect communication	Quotes do give me inspiration, and I think they influence how I talk to people. Sometimes those words come up when I'm trying to encourage someone else.
9.	NAS	Be more confident	Since I started regularly seeing motivational quotes, I've felt more confident sharing my opinions, especially during meetings or group discussions. It's like those words give me a silent push
10.	DSM	Often use in daily conversation	I rarely quote motivational sayings in daily conversations, but I often save them as personal reminders. I read them again when I need emotional strength.

**Table 1. Individual Relevance of Motivational Quotes According to Respondents**

Several participants showed emotional and empathetic responses to motivational quotes, suggesting a possible link to mirror neuron activity. For instance, when respondents mentioned feeling understood, emotionally moved, or inspired after watching quotes related to struggle or courage, it indicates an internal simulation of others' experiences. This aligns with the function of mirror neurons, which fire both when an individual performs an action and when they observe someone else doing it. By seeing or hearing motivational messages that reflect resilience, pain, or success, individuals may neurologically “mirror” these states, resulting in a heightened emotional engagement, increased empathy, and a deeper personal connection to the content.



In addition to emotional responses, many respondents noted that motivational quotes influenced their communication skills. Some became conversations. In this way, motivational content does not only uplift internally but also translates into external behavior—fostering assertiveness, clarity, and emotional resonance in interpersonal communication. These outcomes suggest that consistent exposure to motivational more confident in expressing opinions during discussions, while others felt empowered to speak publicly or to communicate more openly. A few even mentioned that quotes indirectly shaped the way they interact with others, including how they provide encouragement or initiate reflective messages may support the development of both expressive and empathetic communication over time.

## **Discussion**

In this section, the research findings are further analyzed to understand how the activation of mirror neurons through motivational quotes can affect college students' communication skills. The results showed a strong correlation between exposure to motivational quotes and increased confidence in communication. The findings suggest that motivational quotes in Instagram Reels play an important role in improving college students' self-confidence and communication skills through mirror neuron activation. The process of viewing and internalizing motivational content can increase self-efficacy and willingness to participate in more meaningful conversations.

### **1. The Role of Mirror Neurons in Motivation**

Mirror neuron activation in this context serves as a neurological mechanism that allows individuals to mimic and internalize the motivational messages they see. When a person is exposed to an inspirational quote, their brain responds in a similar way as if they experienced the motivation first-hand. This process helps form a positive mindset that can boost confidence in speaking and interacting with others.

In this study, the majority of respondents reported increased confidence after viewing motivational quotes, indicating that powerful inspirational messages can effectively influence cognition and emotions. Thus, it can be concluded that mirror neuron activation occurs not only in the context of direct social interactions, but also in non-verbal interactions such as reading or viewing motivational messages online.

According to mirror neuron theory, individuals tend to mimic the behaviors and emotions they observe. In this study, mirror neuron activation appeared to facilitate improved motivation and communication skills. The fact that 83.3% of respondents felt more confident after being exposed to motivational quotes supports the idea that exposure to inspirational behaviors and expressions can affect one's cognitive and emotional state. However, 16.7% of respondents did not experience this effect, which suggests that factors such as individual differences in cognitive processing, emotional resilience, and frequency of exposure to motivational quotes may moderate their impact.

## **2. Improving Communication Skills Through Motivational Quotes**

Apart from boosting self-confidence, motivational quotes also play a role in shaping more effective communication patterns. The survey results show that most students not only internalize motivational messages but also discuss them with their friends. The fact that 80% of respondents have discussed motivational quotes with others shows that these messages have the potential to be a tool in strengthening social relationships and building better speaking skills.

In an academic setting, good communication skills are essential for conveying ideas, participating in class discussions, as well as building professional networks. Therefore, exposure to motivational quotes may contribute to helping students overcome speaking anxiety, feel more confident in expressing opinions, and be more active in daily conversations.

However, although most respondents felt encouraged to speak more confidently, only 6.7% of respondents frequently used motivational quotes directly in their daily conversations. This suggests that the impact of motivational quotes is more internal than explicitly expressed. Other factors such as culture, social context, and individual communication preferences might influence how one applies the motivation they receive from the quotes into real conversations.

Overall, this study provides insight into how motivational quotes on Instagram Reels can affect college students' communication from both a psychological and social perspective. By understanding the relationship between mirror neuron activation and communication patterns, these results may provide a basis for new approaches to improving speaking confidence among university students through motivational media. This study also highlights how motivational quotes contribute to college students' communication skills. The fact that 80% of respondents have discussed motivational quotes with others suggests that these messages can serve as a social stimulus that helps college students develop speaking skills and build confidence.

However, the percentage of respondents who frequently use motivational quotes in their daily conversations is relatively low (6.7%), which suggests that their impact is more internal than expressive. This is in line with previous research which states that although motivational quotes influence mindset, their impact on verbal expression is highly dependent on the individual and the social situation.

## **3. Relevance of Motivational Quotes to Individual Behavior**

The findings of this study reveal that motivational quotes on Instagram Reels have both cognitive and emotional significance for individuals. Participants reported that such quotes helped them overcome laziness, shift their perspectives, and gain emotional strength. These responses suggest internal psychological processing that may be linked to mirror neuron activation, where individuals subconsciously reflect or simulate the emotions and intentions presented in the content they consume.

In terms of communication, motivational quotes contributed to increased self-

confidence, particularly in expressing opinions and engaging in discussions. While most respondents rarely quoted the messages directly in daily conversation, many felt internally motivated to speak up, be more empathetic, and connect with others on a deeper level. Additionally, the act of sharing and discussing motivational content with friends or family indicates that these quotes serve not only personal purposes but also social functions.

Interestingly, the impact of motivational quotes tends to be more internalized than explicitly expressed. Only 6.7% of participants reported frequently using motivational quotes in daily interactions, yet a majority acknowledged their influence on mindset, emotional resilience, and communicative readiness. This suggests that motivational quotes function more as emotional and cognitive triggers, rather than direct verbal tools. In conclusion, even though the content is brief and often consumed casually, motivational quotes have the potential to shape individual behavior, enhance emotional intelligence, and support communication confidence in meaningful ways.

## **CONCLUSION**

This research discusses two main things, namely whether motivational quotes on Instagram Reels can activate mirror neurons and how they affect students' communication skills. The results show that motivational quotes can evoke positive emotions and mindsets. Students who frequently viewed the quotes felt more motivated, confident and ready to face challenges.

However, despite the increase in confidence, the effect on communication skills was not that great. Many students felt inspired, but only a few actually applied the motivational messages in their daily conversations. This means that while motivational quotes can provide encouragement, communication skills are still affected by individual habits and social environments.

Thus, motivational quotes in Instagram Reels can indeed help students think more positively and confidently, but they are not strong enough to directly improve their communication skills without other supporting factors.

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