International Journal of Learning, Teaching and Educational Research
Vol. 21, No. 10, pp. 436-456, October 2022
https://doi.org/10.26803/ijlter.21.10.24
Received Aug 2, 2022; Revised Oct 16, 2022; Accepted Oct 24, 2022

The Influence of Socio-Affective Learning and Metacognition Levels on EFL Listening and Speaking Skills in Online Learning

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Abstract. This research studied the possibility of applying socio-affective instruction in online learning in Indonesia during the pandemic. The main objectives of this study were to investigate how Socio-Affective Instruction (SAI) and metacognition levels affected the students' listening and speaking proficiency and to investigate students' perceptions. This was experimental research with one group using a pre- and a post-test. The research sample was 41 students, with a total population of 84 students. The instruments were speaking and listening tests, metacognitive awareness questionnaires, and open-ended questionnaires. The non-parametric test was used to analyse the quantitative data, and Open Code was used to synthesize the student perceptions. The result reported significant differences between the listening and speaking pre- and post-test, indicating that SAI significantly influenced students' listening and speaking proficiency. Students with high metacognition showed a significant difference in listening and speaking proficiency, indicating metacognition's significant influence on listening achievement compared to speaking. The perceptions revealed that students valued a comfortable environment during online learning. However, online learning caused learning collaboration to have many disadvantages. The metacognition level contributes significantly to students listening proficiency. In conclusion, although the SAI was applied to enhance collaboration, students tended to work individually. On the contrary, metacognition did not influence students' speaking proficiency because students cooperated well and were much influenced by peer assistance.

Keywords: Socio-Affective Learning; metacognition; listening; speaking; E-Learning

1. Introduction

Due to the Covid 19 outbreak, the Indonesian government prohibits direct offline courses and suggested online learning to continue the teaching and learning process. Many problems emerge because of the sudden changes in the education system (Abidah et al., 2020; Nartiningrum & Nugroho, 2020; Roziqin et al., 2021). The students' negative learning behaviour often occurs because of low motivation and a lack of interest in online learning. Students should be independent learners who learn based on their willingness and learning regulation because teachers cannot assist them directly (Arkorful & Abaidoo, 2015; Efriana, 2021; He & Chen, 2017; Jenna Gillett-Swan, 2017).

Many Indonesian students live in rural and small villages with low internet bandwidth. Since some areas lack good internet coverage, many students have problems doing online courses. However, English as Foreign Language (EFL) learning requires of students to practise language skills. Since the class is offered online, students might lack interaction to practise the language. This ensues in many challenges to EFL teachers to manage English online learning effectively, especially in rural areas.

Online EFL learning is done with limited direct interaction, and students often take the classes for granted, because they do the tasks at home without direct supervision. Moreover, online learning only focuses on individual cognitive learning and pays less attention to the value of social interaction and affective involvement. The quality of the interaction depends on the internet connection. This is a disadvantage for students in rural areas (Al-Khresheh, 2021; Mu et al., 2022). The interaction intensity is crucial for speaking practice; students must cooperate with peers or partners. Cooperative partners will improve speaking proficiency and create effective learning opportunities (Newton & Nation, 2009; Rabab'ah, 2016). Moreover, cooperative learning could stimulate learning motivation and eventually increase learning achievement (Bećirović et al., 2022)

The tendency of students to be individual learners is high. They need to control their learning regulation with less direct supervision from teachers. The awareness to manage learning regulation and the strategy used determine their learning success. Researchers found that metacognitive learning affects students' learning achievement. It has a major impact on listening comprehension (Forbes & Fisher, 2018; Goh & Hu, 2014; Tanewong, 2019). In contrast, socio-affective learning is suitable to teach speaking because it emphasizes socio-interactive learning and affective involvement. The socio-affective strategy trains the learners to be aware of their feelings, appreciate the social relationship, and value social interaction as part of their learning process. Learners learn how to cooperate, encourage, and control their emotions to gain more benefits during language learning (Allah, 2016; Fotokian, 2015; Gurman-Kahraman, 2013; Muin & Aswati, 2019; Syafri, 2016)

One of the universities that implement online learning is *Universitas Muria Kudus*. It is one of the private universities in Kudus, a small regency in Central Java, Indonesia. Many university students live in rural and small villages with low

internet bandwidth. Since the area lacks good internet coverage, many students experience problems doing online courses. The English Education Department needs to create an environment that enables students to practise language skills. Since the class was conducted online, students' limited interaction to practise the language caused many disadvantages.

The transition from offline to online learning required teachers to adjust the learning strategy and supporting media for teaching. For teaching listening, teachers needed to ensure the accessibility of the audio materials to meet the curriculum requirements and students' needs. In teaching students to speak English, teachers encountered a lack of interaction during online learning. Moreover, the institution did not provide a supportive platform for convenient video conferences, and the low internet bandwidth affected the quality of direct video conferences. In considering the problems during online learning at the institution, teachers need to increase student interaction, build students' and teachers' rapport, and provide students with model texts to practise speaking. By integrating the topics, listening could be considered as the language input for learning to speak. Socio-affective learning offered the possibility to apply cooperative learning that might increase interaction.

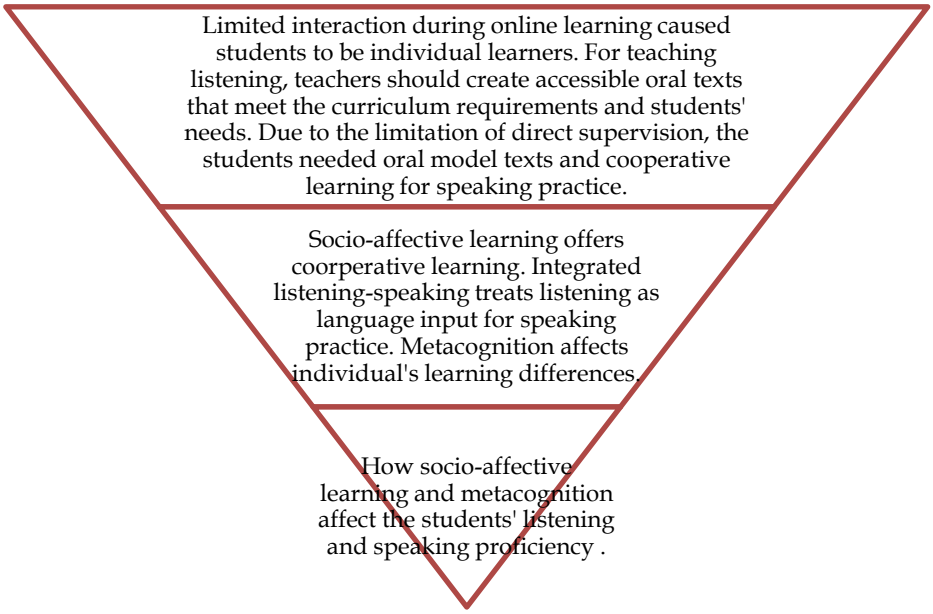

Figure 1. Research Problems

Figure 1 above indicates various issues that arose during the study. The researchers conducted this research to investigate (i) how Socio-Affective Instruction and metacognition levels affect the students' listening and speaking proficiency during online EFL learning, and (ii) how the students perceived the socio-affective learning instruction during online EFL listening and speaking practice.

This research offered explicit sequences of socio-affective learning for listening and speaking practices in synchronous and asynchronous online learning. This socio-affective learning outlined cooperative learning by organizing the students

into learning communities that enabled them to cooperate inside and outside the classroom for listening and speaking practice. The learning sequences began with topic engagement and social interaction initiated by the teacher as the opening session. In the main session, students managed group work and socio-affective learning by practising the given topic. At the end of the learning session, students calmed down by listening to music or playing simple games to relax and reduce anxiety. The closing session focused on sharing feelings among students to develop affective involvement.

2. Theoretical review

Socio-affective strategies help learners regulate and control emotions, motivations, and attitudes toward learning and support learners to learn through contact and interaction with others. A socio-affective learning strategy is also believed to reduce students' anxiety and other adverse psychological effects (O' Malley & Chamot, 1995; Oxford, 2013; Vandergrift† & Cross, 2018). Indonesian EFL learners consider speaking the most difficult language skill to acquire, due to negative psychological aspects such as less self-confidence and high language anxiety. By applying the socio-affective strategies, language learners are expected to lower their anxiety and solve problems through teacher-students or peer interactions. Therefore, using socio-affective learning strategies serves as a good alternative in language learning.

Socio-affective strategies offer different learning activities. Socio-affective strategies take effect when language learners cooperate with classmates, question the teacher for clarification, or apply specific techniques to lower their anxiety levels (Oxford et al., 2014; Vandergrift† & Cross, 2018). This strategy might be well applied in teaching to speak because speaking, as a complex skill, should be taught under specific circumstances that enable learners to interact and learn in groups (Burns, 2016). Gurman-Kahraman (2013) found that a socio-affective strategy indicates a statistically significant decrease in the participating students' overall anxiety levels. Shofwani (2019) proved that socio and affective strategies effectively increased students' speaking ability with different confidence levels (Gurman-Kahraman, 2013; Shofwani, 2019).

However, the students' tendency to use cognitive and metacognitive strategies during online learning creates learning gaps. In metacognitive learning, students practise autonomous learning frequently. The strategy trains students to control their learning regulations and highlights individuals' characteristics in learning. Learners apply strategies and tactics that prove to be beneficial and evaluate and enhance their learning. Although a metacognitive strategy improves individual learning potential, it undermines the socio-affective factors that occur during learning cooperation and interaction (O'Malley & Chamot, 1995; Oxford, 2013; Oxford et al., 2014).

Metacognitive learning supports autonomous learning. However, becoming autonomous learners does not mean working individually. In speaking practice, students need to cooperate with peers or partners. Cooperative partners will improve speaking proficiency and create effective learning opportunities

(Newton & Nation, 2009; Rabab'ah, 2016). Researchers found that metacognitive learning best suits listening comprehension (Forbes & Fisher, 2018; Goh & Hu, 2014; Rahimi & Katal, 2013; Tanewong, 2019; Vandergrift & Goh, 2012). In comparison, socio-affective learning is suitable for teaching spoken language because it emphasizes socio-interactive learning and affective involvement.

Listening and speaking are always integrated during communication; therefore, teachers should teach these two skills as receiving and responding to information. Although the students may know how to listen and speak in English, they may not communicate properly, mainly because these skills are not taught in integration. Limited research exists investigating how listening correlates to speaking by adopting an experimental research design that implements a particular teaching strategy or technique. Some researchers correlated the students' listening and speaking scores and reported that they were correlated positively (Abu-Snoubar, 2017; Demir, 2017; Hoang & Ngoc, 2021).

3. Methodology

In this study, an experimental design was employed with one group and doing a pre- and a post-test. This research was conducted in 2021 during the Covid-19 outbreak in a new e-learning environment. Quantitative and qualitative data were analysed . The quantitative data comprised findings about the students' listening and speaking proficiency from experimenting with socio-affective intervention. Metacognitive awareness level refers to the mediated variable that divided the participants into two groups. Qualitative data were gathered during the experiment using open-ended questionnaires that recorded the students' perceptions after the intervention. These data were used to clarify students' activities during the intervention. This research required mixed-method data analysis (Creswell, 2014). The quantitative data analysis was used to evaluate the effect of SAI and metacognition levels on students' listening and speaking skills. The qualitative data were used to explain the SAI process and the socio-affective factors that influence the students' learning achievement.

3.1. Subject

The population of this research was 84 female and male Indonesian EFL university students. The subjects of the research were 41 students organized into two different classes. This research used cluster sampling because the groups were selected from four classes of the same academic year in Universitas Muria Kudus, eastern Central Java, Indonesia. The research was conducted in their second semester during the *Intensive Listening* and *Speaking for Daily Communication* classes. The two groups of sampling were chosen due to the schedule arrangements by the head of the English department.

3.2. Instruments

The research instruments were metacognitive awareness questionnaires, listening and speaking tests, and open-ended questionnaires. The Metacognitive Awareness Listening Questionnaire MALQ was revised, based on the works of Vandergrift and Goh (Vandergrift et al., 2006). This instrument was designed for researchers and instructors to assess the extent of students' metacognitive

awareness in listening comprehension. The MASQ (Metacognitive Awareness Speaking Questionnaires) was developed based on Vandergrift and Goh's studies to measure students' metacognitive awareness in speaking. The researchers adjusted the substance of the questionnaire by considering some strategies that best suited speaking practices (Sulistyowati et al., 2022).

Furthermore, to measure listening proficiency, the researcher used multiple-choice listening test questions taken from the book, the *Longman Complete Course for the TOEFL Test*, which consists of authentic TOEFL (Test of English as Foreign Language) items. The items were selected and adjusted according to the listening and speaking intervention topics. Forty items were selected, and eight questions were eliminated after the multiple-choice validity and reliability test was done.

To assess speaking proficiency, the researchers designed an interview-based speaking test. The test was designed and validated based on internal validity by considering the content and face validity. To complete the speaking test, the students answered a series of questions and did the speaking instruction by self-recording. The speaking scoring rubrics included fluency and coherence, lexical resources, grammatical range and accuracy, and pronunciation as the assessed speaking aspects.

The researchers also collected qualitative data using open-ended questionnaires to support the quantitative data. The questionnaires were used to evaluate the learning process and gather students' perceptions during the intervention. The question items were focused on the socio-affective learning procedures, such as how students and teachers initiate the interaction, group working management, students' emotion and relaxation, and their expectations. Students completed the questionnaires using Google Forms, and the questionnaires were done anonymously.

3.3. Data Collection and Intervention

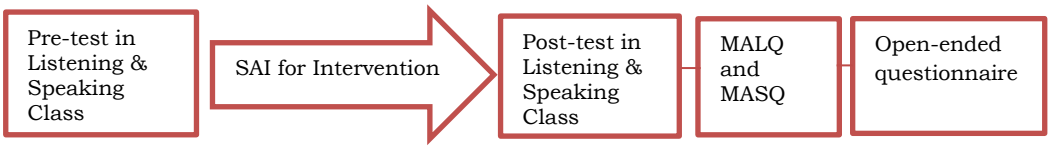

Figure 2. Data Collection Procedures

Figure 2 is a representation of the data collection procedure. After a pre-test had been administered to the experimental group before the intervention, the students were guided to apply socio-affective learning principles during the intervention period (*cf.* Oxford, 2013). The learning processes were done online by utilizing the zoom application. A few sessions used asynchronous learning activity by utilizing Google Form administration software to manage the assignments and was supported by WhatsApp Messenger to give indirect instruction and clarification if needed. To support the speaking practice, students self-recorded their online conversations and uploaded them on the YouTube website.

The sequences of the lesson were the following. The intervention lasted one semester with 14 weekly meetings in four months. After the intervention, the researchers measured the students' speaking and listening proficiency to gather the after-effect data.

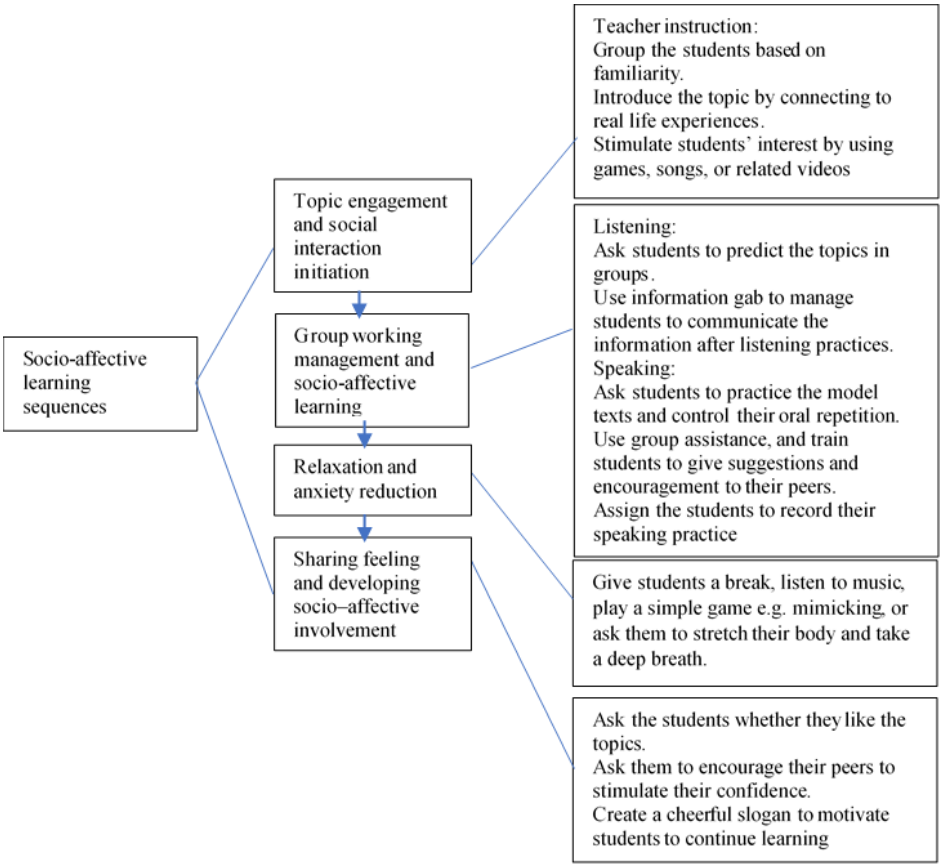

Figure 3. Socio-Affective Learning Sequences

The listening and speaking practices shared the same topic in every meeting. This learning design facilitated the concept of integrated learning in listening–speaking practices. This concept highlighted the principles of listening as receptive skills and speaking as productive skills. The two major listening concepts, listening as comprehension and language acquisition, were applied to accommodate students in increasing their oral texts comprehension and developing their speaking skills by acknowledging the linguistic features and common expressions used in a particular language use context.

3.4. Data Analysis

Because the number of the data sources were less than 50 and unlikely to be heterogenic or non-normal, data subsequently were subjected to non-parametric test analysis. The pair sample data were analysed using the Wilcoxon test to confirm the significant difference between the pre-test and post-test scores of the listening and speaking proficiency, and to determine the significance of the difference between the independent samples; the researchers used the Mann-Whitney U test. The data comparison involved four groups; Students with High and Low MALQ and Students with High and Low MASQ.

Table 1. Quantitative Data Analysis

Type of Test	Skills	Data comparison
Wilcoxon	Listening	Pre & Post-test (High MALQ)
		Pre & Post-test (Low MALQ)
	Speaking	Pre & Post-test (High MASQ)
		Pre & Post-test (Low MASQ)
Mann Whitney	Listening	Post-test (High & Low MALQ)
	Speaking	Post-test of (High & Low MASQ)
	Listening & Speaking	Listening & Speaking Post-test (High MALQ & MASQ)
	Listening & Speaking	Listening & Speaking Post-test (Low MALQ & MASQ)

The classification of students with high and low metacognition achievement was calculated based on their responses by using a Likert scale on MASQ and MALQ. To classify the students into high and low metacognition, the researchers calculated the mean score of MASQ and MALQ. The students with metacognition scores higher than the mean score were included in the high metacognition group, and those with metacognition scores lower than the mean were included in the low metacognition group.

Inductive coding was used to interpret the raw textual data from the questionnaires gathered during the intervention (*cf.* Creswell, 2014; Elliott, 2018). The data coding process uses the Open Code application for qualitative coding data from open-ended questionnaires. The open coding was done to analyse the data line-by-line, every sentence and word from the strands of meaningful text from the students' statements. This coding process was required to build concepts and categories related to the success of the SAI. The quantitative data were combined with the qualitative data to interpret the research findings.

4. Findings

4.1. The effect of SAI and metacognition on Listening and Speaking

The normality test was done to decide on the test used for the quantitative data analysis. Because the listening test data were non-normal, this research required a non-parametric statistical test.

Table 2. Normality Test

Group	Kolmogorov-Smirnov			Shapiro-Wilk			Normality
	Statistic	df	Sig.	Statistic	df	Sig.	(Sig. > .05)
Speaking (High MASQ)	.190	20	.056	.919	20	.096	Normal
Speaking (Low MASQ)	.176	21	.090	.921	21	.092	Normal
Listening (High MALQ)	.256	20	.001	.787	20	.001	Non-normal
Listening (Low MAlq)	.217	21	.011	.832	21	.002	Non-normal

Table 3 presents the results of the listening and speaking pre- and post-test. The listening proficiency of students with high metacognition increased significantly (26.9); those with low metacognition increased by 15.19. Speaking with the low metacognition group (9.96) and Speaking with the high metacognition group (7.55).

Table 3. Descriptive Statistics of Listening and Speaking Proficiency with different metacognition

Skill	Meta-cognition Level	Test	N	Range	Min	Max	Mean Statistic	Std. Error	Std. Deviation	Variance
Speaking	High	Pre	20	28	52	80	68.30	1.881	8.411	70.747
		Post	20	22	65	87	75.85	1.366	6.107	37.292
	Low	Pre	21	21	54	75	61.71	1.469	6.732	45.314
		Post	21	18	62	80	71.67	1.101	5.043	25.433
Listening	High	Pre	20	81	0	81	58.55	5.225	23.368	546.050
		Post	20	66	34	100	85.45	4.055	18.132	328.787
	low	Pre	21	71	13	84	52.71	5.703	26.136	683.114
		Post	21	87	13	100	67.90	6.805	31.185	972.490

The Wilcoxon Rank Test was done to analyse the effectiveness of the SA Instruction for improving the students' listening and speaking proficiency. This statistical test compares the pre- and post-test scores for each group with different levels of metacognition. The result reports that SAI effectively increased the students' language proficiency.

The researchers compared the pre- and post-test to examine the listening and speaking development after the intervention. The groups' report indicated that all pre- and post-tests showed significant differences as the Asymp. Sig. (2-tailed) is lower than 0.05. The result indicates that SAI positively influenced students' speaking and listening proficiency for both groups of high and low metacognition (Table 4).

Table 4. Pair Sample Test of Pre- and Post-test of Speaking and Listening with Different Metacognitions

	Speaking		Listening	
Metacognition Level	High	Low	High	Low
Z	-3.926	-3.951	-3.846	-3.270
Asymp. Sig. (2-tailed)	.000	.000	.000	.001

The Mann-Whitney U test for the independent sample test reported that not all post-test comparisons showed significant differences. The test showed a significant difference if the Asymptotic Significance (2-tailed) is lower than 0.05. However, only the comparison of listening with high and low metacognition groups and the comparison of speaking and listening in high metacognition groups showed significant differences (Table 5).

The post-test speaking scores of high and low metacognitions did not differ significantly. It can be concluded that the level of metacognitive awareness does not significantly influence speaking achievement after the socio-affective instruction intervention.

Table 5. Independent Sample test of listening and speaking with different metacognition groups

	Different Skills		Different Metacognition	
	Speaking	Listening	High Metacognition	Low Metacognition
Mann-Whitney U	140.000	133.000	98.500	181.000
Wilcoxon W	371.000	364.000	308.500	412.000
Z	-1.838	-2.018	-2.753	-.996
Asymp. Sig. (2-tailed)	.066	.044	.006	.319

Low metacognition students' listening and speaking achievements also were compared to determine their best skills. The statistical Mann-Whitney showed no significant difference between listening and speaking achievement. The Asymp. Sig. (2-tailed) was valued at .319, which is higher than the *p*- .05. In conclusion, SAI had an insignificant influence on listening and speaking among students with low metacognition.

4.2 Students' Perceptions

The qualitative data analysis reported that students had their own perceptions of applying socio-affective instruction for learning to listen and to speak. The researchers synthesized the perceptions into several categories. These were: learning media and instruction, the problems, socio-affective learning indicators, and students' expectations. The synthesis was outlined to determine some aspects that affect learning success during the intervention.

Table 6. Students' Perceptions

Synthesis 2	**Synthesis 1**	**Students' Perceptions**	**N**
Learning Aids	Learning materials	Topics are interesting	9
		The learning materials are simple	3
		The teacher gives learning variation	5
	Instruction	Module guides learning	1
		Teacher explains clearly	3
	Aids	Songs are interesting	2
		Videos are interesting	1
Problems	Group working problem	Collaboration is limited	3
		Organization is poor	6
		Few students work in the group	6
	Interaction problems	Less interaction caused student-teacher gap	2
		They have limited speaking exposure	1
		Not all students interacted	4

		Low participation	1
	Negative Emotion	Low confidence	4
		Feeling anxious	10
		Less interested in learning	1
		Task makes nervous	9
		Test makes nervous	2
	Technical problems	Poor internet connections	2
		Offline learning preference	1
Socio-Affective Indicators	Feeling and Emotion	Cheerful slogan increases enthusiasm	2
		Doing tasks is a challenge	4
		They feel relaxed and enjoyment	10
		Learning is pleasant	12
		Games increase enthusiasm	4
		Games reduce anxiety	13
		Group work reduces anxiety	2
		Music gives relaxation	10
	Group working management	They cooperate well	2
		They made equal contributions to the group	7
		Group work reduces anxiety	2
		Peers assistance	6
	Social Interaction	Games stimulate interaction	7
		Students-teacher interactions occur	10
		Group working enhanced interaction	16
Students' Expectation	Learning expectation	They need better group management	2
		They need clear instructions	6
		They need evaluation	1
		They need games and songs	4
		They need individual work	1
		They need more fun games	4
		They need intensive interaction	3
		They need more relaxation and enjoyment	7
		They need more time for tasks	4
		They need offline meetings	3
		They need more speaking practice	1
		They do not want any video tasks	1

5. Discussion

How strategy and tactics influence the listening achievement was reported (Chin et al., 2017; Goh & Hu, 2014; Tanewong, 2019). The research findings claimed that students' listening achievement was influenced by metacognitive instruction and

the student's awareness of the strategies used. This study reports a significant difference when comparing the listening pre- and post-test of the low and high metacognition groups. It indicates that the SAI as listening instruction had a significant effect on students with high and low listening metacognitive awareness. Previous research reported that socio-affective learners consistently rank at the bottom compared to those who used other strategies, and they preferred to choose cognition and metacognition while listening (Bidabadi & Yamat, 2011; Huang & Nisbet, 2019; Serri et al., 2012). However, as the only intervention, SAI positively influenced students with high and low metacognition. When the post-test result of listening is compared for the two groups, a significant difference is confirmed, and the post-test mean increases significantly. The increase in the mean score of the high metacognition group was higher than that of the low metacognition group. In conclusion, the high metacognition group derived more advantage from the intervention.

However, the students' speaking proficiency did not show a considerable difference between the two groups; therefore, no significant difference was found. When the students were tested using an indirect interview-based speaking test, they responded to the questions with various levels of vocabulary use, fluency, grammatical accuracy, and pronunciation. Most students managed to answer the questions in the test, and the different levels of speaking achievements resulted from the variance in speaking fluency, grammatical errors, vocabulary limitation, and miss pronunciation. Students with lower achievement often paused, and they did not sound natural when responding. They maintained the flow of speech, but used repetitions, self-correction, and practised slow speech to keep speaking. They talked about familiar topics, but used vocabulary with limited flexibility and attempted to use short paraphrases with obvious grammatical errors that may cause comprehension problems.

The pre-and post-test comparison shows significant differences for both groups. The mean of the students with high metacognition increased by 7.55 points, and the mean of those with low metacognition increased by 9.96. In conclusion, students with low metacognition took more advantage of learning to speak. Therefore, in learning to speak, the students' metacognitive awareness did not significantly affect their speaking proficiency. Although various studies (Arp, 2016; Forbes & Fisher, 2018; Hermayani, 2020; Lye & Goh, 2018) claim that metacognition can be employed as an effective strategy for speaking practice and it offers many benefits regarding the possibility of students' strategy awareness, self-efficacy, and self-regulatory in learning, many other aspects influence the success of learning. Speaking is a complex language skill because it involves students' ability to manage emotional constraints, such as lack of confidence, anxiety, and low motivation. Online speaking practice may give students more challenges depending on their levels of confidence and anxiety. Speaking in front of the camera, video recording, and virtual speaking performance via zoom sessions for Indonesian EFL students, who are unfamiliar with online speaking exposure, may be considered a threat that affects their speaking confidence.

Regardless of the different degrees of improvement of the two groups, the SAI significantly affected students' speaking skills. The socio-affective learning contributes to speaking by lowering negative emotional issues that impact on communication, such as anxiety, lack of motivation, confidence, and self-efficacy (Jamaluddin, 2015; Muin & Aswati, 2019; Shofwani et al., 2019).

This research also reports that listening and speaking skills show different results. The HMA group significantly differed when their listening and speaking achievements were compared. The mean score of the listening post-test was higher than the speaking score. In conclusion, students with high metacognitive awareness achieved higher listening scores than those speaking. This result supports the previous statements that metacognition level affects listening proficiency more. These findings were supported by previous research and theories that indicate that when students use a metacognitive strategy in learning to listen, they will get more benefits and improve their listening significantly (Lye & Goh, 2018; Rahimi & Katal, 2013; Vandergrift & Goh, 2012).

After the intervention, the students' perceptions were analysed to find the aspects influencing listening and speaking achievement. To summarize, the researchers outlined these important aspects.

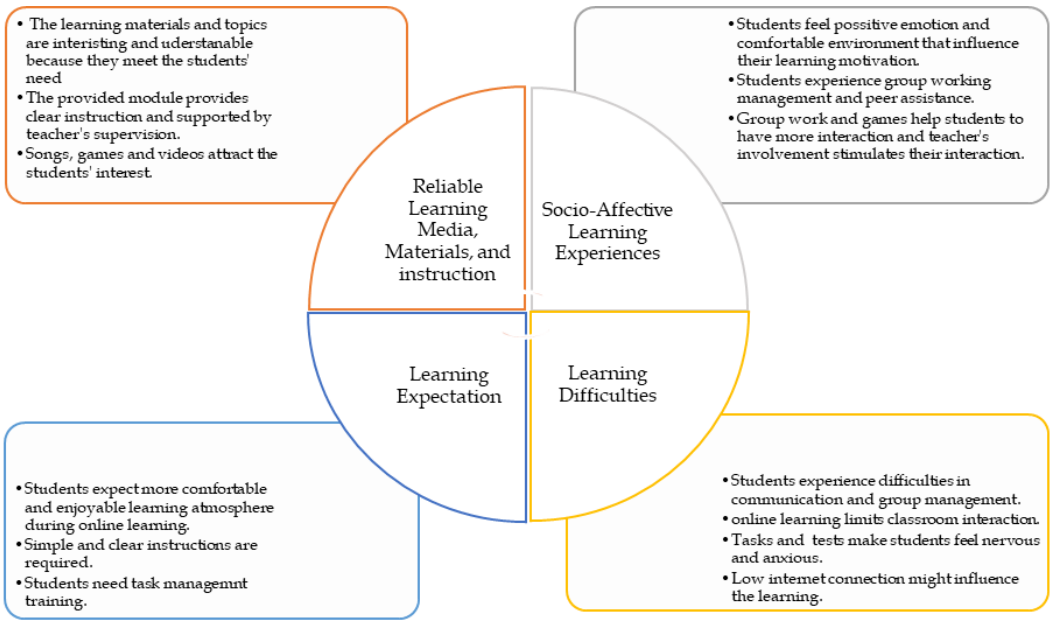

Figure 4. Students' Perceptions

The researchers used open-ended online questionnaires to find factors influencing SAI listening and speaking practices. The items questionnaires interrogated the students as respondents about the implementation of the SAI and the challenges during the intervention, and their learning expectations. In this section, the researchers will explain each of the syntheses. The synthesis in Figure 4 showed some factors that influenced the students during learning. The first category was the materials, media, and instructions reliability. The second was problems and

difficulties. The third was socio-affective indicators that highlighted feeling and emotion, working group management, and social interaction. The last was the students' expectations.

Students explained that the teacher provided more exciting learning materials and media to cope with virtual learning. The students perceived they had exciting topics and simple learning materials with various topics and media. They have many different learning topics related to their daily English needs. Students stated:

> *'I think the topic is attractive, and the learning style is not monotonous, so I do not feel bored…' (Student 3).*
> *'I feel interested, and the learning materials are given in a fun and simple way; therefore, I like to actively discuss the materials with classmates and teachers. I like learning with friends, and it makes me feel motivated.' (Student 4)*
> *'I think the topics are very interesting, and the topics are varied and related to daily life language use, therefore, I do not feel bored during the lesson, and I can follow the materials easily … (Student 15)*

The text-based approach was used to choose the topic of learning. The learning aims were to train the students to understand and produce English used for international communication (Melissourgou & Frantzi, 2017). Therefore, the topic focused on English used in daily informal communication, formal communication, short functional text, and longer text with specific genres, such as descriptive, procedures, and narratives. Thus, students thought that they had many variations in topics. The teacher used songs and videos to provide exciting and engaging media. The teacher created a comfortable and lively atmosphere for online learning by singing and playing audio videos related to the topics. Due to the massive development of EFL online learning, teachers must choose learning media relevant to distance education and web-based learning (Arkorful & Abaidoo, 2015; Rigo & Mikus, 2021).

The students experienced socio-affective involvement and felt the advantages of using SAI for online listening and speaking. They highlighted three aspects; feeling and emotion, group working management, and social interaction. The ability to control their negative emotion is beneficial for learners to achieve better results (Saeidi & Khaliliaqdam, 2013). The following excerpts revealed the students' perceptions:

> *Grouping arrangement at the beginning of the lesson stimulate my interaction among classmates, and I think my interaction with the teacher is very good because he gives ice breaking session that makes the lesson not monotonous and boring… (Student 1)*
> *… many games make us interact…. I feel comfortable playing in games… (Student 13)*
> *…. I like to interact with others, so in group working, we do the work enthusiastically by sharing the ideas … (Student 15)*
> *… In group work, I prefer interacting with friends in the group and sometimes sharing with other groups… (Student 29)*

There were several ways that the teacher created to fill the students with positive emotions during the intervention. They created a cheerful slogan for the class and each group to increase enthusiasm and students' motivation. Students thought that it increased positive emotion. This activity is also helpful for encouraging students and stimulating their self-efficacy. Simple online games and relaxing music were set to reduce anxiety and increase fun and enjoyment during intervention sessions. Students thought that games reduced their anxiety and enjoyment, and many concluded that learning was a pleasure. Those actions indicated the socio-affective learning principle of managing feelings and positive emotions during learning.

Students also gave positive evaluations of the group's working management. They thought they cooperated well with other group members because they chose the members from the beginning. Therefore, they were familiar with it, making the management more effortless. They claimed that each member tried to make an equal contribution to the task and willingly provided assistance to others. They use chat applications to communicate and discuss the given tasks to manage online group work. Games and group work were applied during the learning to stimulate and control the social interaction between students and teachers. Many students perceived that they felt the responsibility to connect and interact with other group members by working in a group work. They also needed to get the teacher's assistance and maintain good interaction. Social interaction is also a prominent aspect of socio-affective learning; therefore, it is essential to train students to communicate well. Communication occurred while students discussed the task, encouraged, shared feelings, and showed empathy. These were synthesized based on the principles of socio-affective learning (Oxford, 2013; Palagar, 2013).

However, students also encountered many problems during the learning period. Few reported that not all students actively interacted during zoom sessions and cooperated well during group work. Students experience difficulties communicating with group members; as a result, only some students actively participated in a group discussion during the listening task and not all the members could practice speaking online. They found that not all students participated in classroom discussions. Few of them keep silent, refuse to turn the camera on, and sometimes do not respond to the teacher's initiation. Students stated:

> '*Actually, I do not feel comfortable working in a group with many students. …. We have three students, but only two actively do the task, but; one of us did not participate well …. and difficult to contact… (Student 9)*
> '*I can work in the group pretty well… and we can cooperate… but sometimes other member does not care about the task, as a result, it affects our working mood…' (Student 16)*
> *'I feel comfortable with online and offline listening and speaking, but the low internet signal makes the class inconvenient…*' *(Student 28)*
> *'… I feel anxious when suddenly the teacher ask me questions …' (Student 32)*

> *'… In practicing speaking, I feel anxious because I am not very confident in expressing something in class.' (Student 33)*

This phenomenon has become an essential issue in online learning in Indonesia. Although teachers used many variations in learning by choosing related topics and using audio videos, relaxing music, and songs, some students cannot avoid being very nervous, especially when they need to do the tasks online in a synchronous environment.

Because many students live in rural areas, internet connection can be problematic. Students may have difficulties joining zoom sessions with low bandwidth internet connections due to technical problems and limited interaction during online learning. These issues were also reported by previous research. Some scholars claimed that if education institutions wanted to improve their online learning quality, they needed support from the Indonesian government. The government needs to make massive improvements for equal internet availability for all students. E-learning utilities, technology literacy for students and teachers, suitable teaching design, and an intensive evaluation of the e-learning program were required to make the program more effective (Nartiningrum & Nugroho, 2020; Nugraha et al., 2018).

Due to some problems they faced during online EFL learning, students expected more group management training, especially when working in groups in the virtual learning environment. With limited interaction, they needed an effective way of communication among group members. They claimed they preferred explicit instruction to help them effectively manage the task. The students believed they needed to relax and enjoy online learning. Because playing games online is rarely used in online learning, students must understand the instruction well. Despite the limited instruction and kinds of games that could be done online, students thought they needed them to overcome boredom and reduce their anxiety.

> *I hope to have offline class … we, students need to have face-to-face interaction to discuss the assignment … we also need to have a proper discussion with the teacher about the subject …. (Student 2)*
> *…I think it is also important to have individual learning for listening and speaking because not all students feel comfortable working in a group…. In online learning, not all students actively participate in the discussion… all students need to turn on their camera from the beginning of the class …' (Student 21)*
> *'I expect for Listening and Speaking class to have more fun game… The teacher should not directly ask students to speak because that makes them feel anxious and nervous… (Student 27)*

Students value a comfortable environment during online learning. However, online learning caused learning collaboration to have many disadvantages. Limited internet connection caused difficulties in learning collaboration. This fact was supported by previous research on the limitation of online learning during Covid 19 (Abidah et al., 2020; Rigo & Mikus, 2021; Zboun & Farrah, 2021). Students should be facilitated with supportive learning infrastructures. The

statistical analysis reported a significant difference in students listening achievement between the high and low metacognition levels. It means metacognition contributes significantly to students listening proficiency. It was supported by previous research that claimed metacognition positively influenced listening comprehension (Forbes & Fisher, 2018; Goh & Hu, 2014; Liu, 2020; Tanewong, 2019). However, the listening score range was very high (SD: 18 and 30). In conclusion, although the SAI was applied to enhance collaboration, students tended to work individually.

On the contrary, metacognition gave an insignificant influence on students' speaking proficiency. The post-test of the high and low metacognition showed insignificant differences. Students had to cooperate well and were much influenced by peer assistance. These findings showed that metacognition did not significantly influence students' speaking performance when students learned using SAI in the online learning environment. When the students were exposed to interview speaking sessions with the teacher, they tended to produce limited responses and keep silent. It seems that they were inconvenient and preferred their peers' initiations. The SAI to increase students' speaking confidence and motivation was not significantly achieved because some students felt nervous and anxious during their speaking performance. Therefore the application of SAI in an online learning environment contributes differently compared to previous research (Jamaluddin, 2015; Muin & Aswati, 2019; Shofwani et al., 2019)

6. Conclusion

Research reports that SAI has a significant influence in increasing students' listening and speaking proficiency, especially for students with high and low metacognitive awareness. After comparing the pre-test and post-test results, the researchers confirmed the significant difference in the test results between the two groups. The researchers compared the post-test to study metacognition effects on students listening and speaking proficiency during SAI intervention. The listening proficiency of the two groups shows a significant difference; on the contrary, the comparison of the speaking proficiency does not show a significant difference. The high metacognition group shows a significant difference when listening and speaking are compared, but the low metacognition group does not show a significant difference. In conclusion, students with high metacognition benefited more when they learned how to listen, and students with low metacognition improved more significantly in their speaking proficiency.

Students perceived SAI as explicit instruction during online learning that could benefit listening and speaking skills development. Students experienced enjoyment and a comfortable environment by practising SAI as they played games, listened to music, and shared assistance during group work. As for recommendations, teachers can be mediators in stimulating classroom interaction, and role models expressing sympathy, encouraging, and appreciating the students' work. Students need to learn how to express themselves by showing interest, exposing their feeling, and improving their positive feeling toward the learning process. To build empathy among students, teachers can create a learning community to enable students to work together and communicate more by giving

project-based learning tasks. Online learning limits interaction but creates more opportunities for students to be autonomous learners because they can create their own learning environment.

During intervention sessions in 14 meetings, the researchers found that online synchronous listening and speaking practice depended on internet connection quality. Sometimes audio listening might not be audible. Students needed direct links to play the audio, which was stressful and time-consuming. Moreover, students tended to avoid turning on the camera during the video conference, and some important learning aspects, such as motivation, direct attention, learning interest, and group-work management, cannot be observed and measured precisely. Limited direct interaction caused difficulties for students and teachers to maintain communication, which caused misinterpretation in learning instruction. For further research, researchers should focus on designing a reliable system of monitoring and assistance for online learning to support students' on-task behaviour.

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