Teachers' Perceptions of the Use of Self-Regulated Strategy Development in Online EFL Reading Instruction to Foster Students' Autonomy in Online Reading

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Abstract

Plenty of reading materials, either printed or digital, are accessible to facilitate students' reading literacy skills in English as a Foreign Language (EFL). However, only a few research studies examined how strategy instructions can improve students' online reading literacy skills. This study examines teachers' perceptions of the use of self-regulated strategy development (SRSD) in online EFL reading instruction to foster students' autonomy in online reading. The study employed an explanatory mixed-methods design, and the data were collected by using questionnaires and interviews. The study involved 60 Indonesian EFL teachers who responded to the questionnaire and 6 of the teachers who participated in interviews. The findings showed that most of the teachers positively perceived the use of SRSD in online EFL reading instruction to develop students' autonomy. The analysis of the qualitative data revealed that there are three main factors influencing teachers' perceptions of the use of SRSD in online EFL reading instruction: learning mode factors, individual factors, and instructional support factors. EFL teachers are advised to keep developing their professional skills to improve the effectiveness of SRSD in online EFL reading instruction and support students' autonomy. The study addresses implications for online EFL reading instruction and recommendations for future research.

Keywords: autonomy in online reading, online EFL reading instruction, reading literacy skills, self-regulated strategy development (SRSD), teachers' perceptions

Introduction

The ability to read is essential for students of English as a foreign language (EFL) as it can help them improve their language proficiency and better comprehend related content (Nunan, 2003). Good reading comprehension can be attained through various language development activities in the classroom, for example by applying the cognitive reading strategies (Guthrie et al., 2004; Olson & Land, 2007). However, many of students of English as a foreign language (EFL) were not good at reading literacy skills. In Indonesia, for example, only about 30% of students reached the proficiency level or the base line (Level 2) in their reading skill and more than half of the students are below the proficiency level (Levels 1a, 1b, and below 1b), whereas only a small number of students achieved higher levels (Level 5 or 6) on the PISA reading test (PISA, 2018). The difficulty in achieving a higher level of reading is in line with Grabe (2009) who argued that reading is a challenging and complex activity for many students.

One way to cope with the difficulty in achieving a high level of reading skill is through the use of Self-Regulated Learning (SRL) in second or foreign language reading (Chamot, 2014). Students are called self-regulated readers if they can choose sensible reading strategies, keep track of their comprehension of the book, and assess their progress toward their objectives (Horner & Shwery, 2002). The use of SRL techniques is seen as a crucial element in increasing reading proficiency to comprehend a text which encompasses the regulation of three domains of learning: behavior, motivation, and cognition. A study conducted by Mefferd and Bernacki (2023) showed that students must be engaged in self-regulation process in reading to optimise their reading skill. Sashikala and Chye (2023) confirmed that students who self-regulate and control their reading will have a greater chance to be successful readers. Thiede and de Bruin (2018) demonstrated the essential role of monitoring and regulation in SLR to enhance reading comprehension.

Despite the great number of studies which support the benefits of SRL in assisting low-achieving students' reading comprehension, explicit strategy instruction on SRL has been underexplored. Harris et al. (2019) believed that explicit strategy instruction on SRL can be developed and they proposed a model called the Self-Regulated Strategy Development (SRSD). They defined SRSD as a pedagogical approach that encompasses both explicit instruction and metacognitive strategy instruction to cater the students' academic requirements. The SRSD instructional process incorporates self-regulation procedures such as self-instruction, goal setting, self-monitoring, and self-reinforcement.

Research projects devoting to the use of reading comprehension strategies in SRSD instructional model have been issued in numerous reports (Alreshoud & Abdelhalim, 2022; Hagaman et al., 2016; Mason, 2013; Mason et al., 2006, 2012; Öztürk & Çakıroğlu, 2021; Rogers et al., 2020; Sanders, 2020). Rogers et al. (2020) reported that students who used SRSD instructional model in reading class had good performance, engagement and proficiency in their reading integrated with other skills and courses including mathematics. Öztürk and Cakıroğlu's (2021) comparative study revealed that students who were involved in flipped learning within SRS instruction performed better in reading, speaking, writing, and grammar than those who did not use this intervention.

Despite the plentiful use of SRSD as an effective approach to develop students' reading comprehension, the aforementioned studies had not significantly addressed the practices of SRSD in EFL reading instruction from the perceptions of the teachers. Revealing teachers' role in the practice of SRSD in EFL reading instruction can be empowering as teachers direct the students to be more self-regulated through the careful stages of explicit teaching. SRL has been recommended to foster students' autonomy; however, there is a lack of scientific evidence regarding how SRL strategies may lead to autonomous online reading. Due to the important roles of teachers in the use of SRSD in EFL reading instruction, teachers can be monitored to carefully plan activities which can serve as the foundation for learning how to become autonomous readers. Along with the expanding research on SRL, the characteristic of online learning environment becomes a critical factor, yet the role of self-regulation skills in the online learning environment has not received much attention compared to the traditional face-to-face learning environment (Barnard et al., 2009).

Under the circumstances of online reading instruction, it is essential to investigate further the impact of teachers' use of SRSD in EFL reading instruction and how teachers enable the students to develop their autonomy in reading. Therefore, the present study aims to investigate teachers' perceptions on the use of SRSD in online EFL reading instruction. Employing the explanatory mixed-method study, this study is conducted to answer the following questions:

RQ1: How do teachers perceive the use of self-regulated strategy development (SRSD) in online EFL reading instruction to foster students' autonomy in online reading?

RQ2: What factors may influence teachers' perceptions on the use of self-regulated strategy development (SRSD) in online EFL reading instruction?

Literature Review

Self-Regulated Strategy Development (SRSD) in Reading Instruction

SRSD refers to the integration of strategy use with explicit instruction in self-regulation techniques. SRSD uses of a variety of theories related to student behaviour, affect, and cognitive development and learning (Mason, 2013). Students are given clear strategy teaching and support for learning self-control. Students that possess self-regulation abilities are able to independently consider a task before starting it, track their own development as they go, and finally complete the work. Despite the fact that teachers place great emphasis on self-regulation abilities, not all students always have the abilities completely developed (Harris et al., 2019). Paris and Paris (2001) stated that educators possess the ability to instruct students in the practice of SRL and its corresponding strategies within various academic settings and classrooms. For instance, individuals who engage in reading activities ought to employ self-regulated strategies and processes to facilitate their comprehension of textual material.
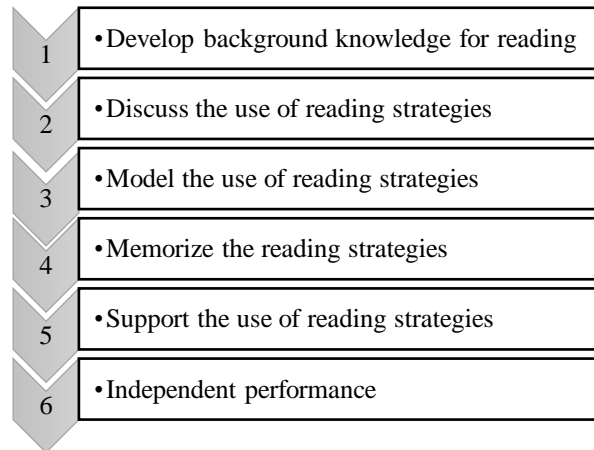
Several studies have shown the effectiveness of the use of the SRSD in reading instructions. A study conducted by Sanders (2020) showed that a particular strategy within SRSD framework is effective to impart self-control and reading comprehension strategies to students. Mason (2004) reported enhancement in students' oral reading comprehension after they were engaged in academic mediation "Think before reading, think While reading, and think After reading" (TWA) within the framework of self-regulated reading strategies. The findings indicated that the significant predictors of SRL instructional practices are teachers' perceptions of the advantages of SRL and students' ability to put it into practice. Another significant predictor of SRL instructional practices is the involvement of female teachers as they had higher levels of SRL instructional practices (Yan, 2018).

SRSD Instruction and its impact on students' autonomy

SRSD involves the explicit teaching of an academic strategy, along with the cultivation of self-regulation skills. The widely employed teaching sequence for SRSD comprises six stages, namely: develop background knowledge, discuss the use of strategies, model the use of strategies, memorize the strategies, support the use of strategies, and independent performance. The sequence of the six stages of SRSD in online EFL reading instruction is illustrated in Figure 1.

Figure 1.

Stages of Self-Regulatory Strategy Development

1	• Develop background knowledge for reading
2	• Discuss the use of reading strategies
3	• Model the use of reading strategies
4	• Memorize the reading strategies
5	• Support the use of reading strategies
6	• Independent performance

The SRSD instructional stages encompass various self-regulation procedures, including but not limited to self-instruction, goal establishment, self-monitoring, and self-reinforcement. Self-regulated learning, one aspect of autonomous learning (Oxford, 2008), emphasizes 'locus of control' or students' decision-making towards their own learning (Reinders & White, 2016). SRSD instruction and student autonomy are interrelated as they both accentuate learners' active engagement, goal-directed behaviour, control, metacognition and responsibility. Papamitsiou and Economides (2019) stated that SRL strategies lead to autonomous control. In other words, SRL strategies have been proposed as a means of fostering learning autonomy. They discovered that goal-setting and time management have significant positive effects on students' autonomy, while effort-regulation has a moderately positive effect.

The result provides empirical evidence that clarifies the role of SRL strategies in the growth of learning capacity. Thus, autonomous learning must be fostered from a perspective of SRL. The acquisition and enhancement of self-regulation skills among students can be facilitated through guidance and practice in educational settings that foster self-initiation and provide assistance for autonomous motivation (Dignath et al., 2008; Pintrich, 2000). In other words, acquiring the ability to regulate one's own activities and tasks can serve as an initial stage in the process of developing autonomy. Oates (2019) signified teacher's role as paramount in the SRL development and autonomous learning support. Understanding how teachers train the students toward the use of SRL strategies through SRSD instructional model can provide insights on how procedures in SLR is carefully administered to stimulate students' autonomy.

Role of teachers in Using SRSD in Reading Instruction in online learning

Teachers' support in online learning is crucial component that affects students' self-regulated learning pertaining to the SRSD instructional model. SRSD in online learning has been studied more recently (e.g., Qi, 2021; Shen & Li, 2022). In online learning based on the SRSD instructional model, the teacher has several roles such as a guide, controller, motivator and supervisor in maintaining learning in its path (Mahmud & German, 2021; Shen & Li, 2022). The teacher can delegate tasks to students to improve self-regulation and performance (Ghavamnia, 2022). In the first step, students read and discuss a text with their friends to build background knowledge by searching in website. They use their prior knowledge to interpret the website text. Hence, it is expected that students engage in self-directed learning to construct their own knowledge, thereby decreasing their reliance on instructors. Alreshoud and Abdelhalin (2022) suggest that the aims and benefits of reading strategies and steps to process reading tasks as a systematic instructional strategy can be outlined in PowerPoints, files, or videos on the school website or Google Classroom. In addition, the teacher must involve students in collaboratively finding their special strategies to facilitate reading, which will give students chances to use these strategies and strengthen their reading efforts (Shen & Li, 2022). The teacher can ask students to retell what they read via Zoom Meeting, and their friends can give comments or ask questions about the main idea, details, conclusion, and act. The teacher can monitor and assess students' independent reading test practice using reading test apps in independent practice (Rahman et al., 2019).

Methodology

Research design

The data in this study were collected in two phases, both quantitative and qualitative within mix-method approach following sequential explanatory design (Creswell, 2003). The quantitative phase provides data regarding how teachers perceive SRSD in online EFL reading instruction, whereas the qualitative phase enables us to investigate further how teachers reveal the factors affecting their SRSD in online EFL reading instruction. In this study, quantitative data were collected by distributing close-ended questionnaire to participants, whilst qualitative data were obtained through semi-structured interviews. The data collected through questionnaires and interviews were analysed independently.

Setting and Participants

The present study was situated in the Indonesian EFL context, in which EFL reading instruction in academic setting becomes pivotal as the curriculum in tertiary education has

placed the emphasis on the acquisition of reading literacy. Hence, teachers as respondents in this study are those who are assigned to teach students with reading strategies to acquire knowledge or skills. The participants for this study were purposively selected teachers from several universities in Indonesia who had experiences in teaching online EFL reading in tertiary level such as how to navigate and retrieve online information. There were 60 Indonesian EFL teachers comprising 14 males and 46 females who filled out the close-ended questionnaire, meanwhile 6 teachers who represented the sample of the population in survey were involved in semi-structured interviews. The demographic information of the research participants is presented in Table 1.

Table 1.

Demography of the Participants in Survey

Category	Classification	N	%
Gender	Male	14	23
	Female	46	77
Age	25-29	3	5
	30-39	36	60
	40-49	13	22
	50-59	7	11
	> 60	1	2
Years of teaching EFL Reading	1-5 years	20	33
	6-10 years	16	27
	11-15 years	13	22
	> 15 years	11	18
Educational Background	Bachelor in ELT	2	3
	Master in ELT	52	87
	Doctorate in ELT	6	10
Region	Java	33	55
	Sumatra	10	17
	Kalimantan	5	8
	Nusa Tenggara	7	12
	Others	5	8
HE Institution	University	48	80
	Polytechnic	12	20

Data Collection Instruments

The data collection instruments utilized in this study consisted of a questionnaire and an interview protocol focusing on the use of SRSD in online EFL reading instruction. Both instruments were adapted from SRSD instructional model proposed by Mason et al. (2013). The questionnaire includes three initial sections: Section I is used to compile participants' demographic information, Section II is used to seek information about EFL teachers' teaching experience in online reading, and Section III is used to discover how teachers perceive stages in SRSD in online EFL reading instruction. In order to ensure the reliability of each item in the questionnaire, a pilot study had been administered to 30 EFL teachers from several universities

in Indonesia through Google Form. The data in pilot study were then analysed using Excel. The result of the analysis showed that the obtained Cronbach's alpha value was 0.91 which indicates a high level of reliability. There were 17 valid items covering the constructs of dimensional functions of SRSD instructional model (Table 2). Then, follow-up questions in semi-structured interviews were administered to figure out how teachers revealed the factors affecting their SRSD in EFL reading instruction. Seven guiding questions developed based on each stage in SRSD instructional model were incorporated in semi-structured interviews.

Table 2.

Dimensional Functions of SRSD Instructional Model

Dimensional functions	Questionnaire items (n)
Develop background knowledge for reading	2
Discuss the use of reading strategies	2
Model the use of reading strategies	6
Memorize the reading strategies	2
Support the use of reading strategies	3
Independent performance	2

Source: Mason et al. (2013)

Data Collection Procedures

Data collection was initiated by asking the participants to complete the adapted Likert-scale in questionnaire and to get involved in semi-structured interviews. Participants were prompted for their consents before data collection. While the Likert-scale questionnaire measures level of instructional practice on SRSD reading from the lens of teachers, semi-structured interviews were administered to collect data related to factors which influenced teacher's SRSD reading instruction. The participants responded to the Likert-scale items by indicating the option on a five-point scale (1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = always). On the average, the interviews lasted for 20-35 minutes. We documented the interview process and made some notes.

Data Analysis Procedures

The quantitative data were analysed by using descriptive statistics. The quantitative information was compiled from the questionnaire responses of 60 EFL teachers and was descriptively tabulated to generate data on frequencies and percentages. The SPSS version 24 was employed to analyse the raw data to search for mean, median and standard deviation. The qualitative data obtained from semi-structured interviews were subjected to thematic analysis. The questions in semi-structured interview address areas including the use of SRSD in online EFL reading instruction to foster reading autonomy. It further investigates factors which

influence teachers' decision to go through particular levels of aspects in SRSD in EFL reading instruction. The qualitative data obtained was coded, and the codes were classified into themes (Creswell, & Poth, 2018). The interview data were analyzed in three steps: familiarizing and organizing, coding and recording, and summarizing and interpreting. Teachers' names in an interview had been changed to initials T1, T2, T3, T4, T5, and T6 in order to ensure confidentiality. The results of the qualitative analysis were used to triangulate the quantitative findings.

Results

Teachers' perceptions of the use of SRSD in online EFL reading instruction to foster autonomy in online reading

Table 3 presents the results of the analysis of the teacher's responses to the close-ended questionnaire items. It informed the calculation results on teachers' level of SRSD in online EFL reading instruction, which is represented by a minimum value of 48 and a maximum value of 85, whereas the mean is 68.33 with a standard deviation of 10.04.

Table 3.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Teacher	60	48	85	68.33	10.04
Valid N (listwise)	60				

The teacher's role regarding the knowledge in utilizing SRSD in online EFL reading instruction was classified in several categories as shown in Table 4.

Table 4.

Description of Variable

Category	Interval Score	Frequency	%
Very high	$71.4 < X \leq 85$	26	43.3
High	$57.8 < X \leq 71.4$	25	41.7
Medium	$44.2 < X \leq 57.8$	9	15
Low	$30.6 < X \leq 44.2$	-	-
Very low	$17 \leq X \leq 30.6$	-	-

Table 4 indicates that 26 teachers (43.3%) were at a very high level. It was followed by 25 teachers (41.7%) who were at high level, whereas nine teachers (15%) were at medium level. Meanwhile, there were no respondents in the low and very low categories. Thus, it is noticeable that the majority of teachers were well-informed about the significance of SRSD in

online EFL reading instruction, as is manifested in their responses regarding classroom practices in using SRSD in online EFL reading instruction, which was at a high level. Besides, the fact that there are no respondents at the low or very low levels indicates that they have adequate knowledge of SRSD in online EFL reading instruction.

The data on how teachers perceive the use of SRSD in online EFL reading instruction to foster autonomy in online reading is displayed in Table 5. In general, teachers show positive responses toward the use of SRSD in online EFL reading instruction which comprises six stages. The majority of teachers showed positive responses, which represented their acceptance of the use of SRSD in online EFL reading instruction.

Table 5.

The Use of SRSD in Online EFL Reading Instruction

Factor	Never (%)	Seldom (%)	Sometimes (%)	Often (%)	Always (%)	Mean
Develop background knowledge for reading	2%	1%	12%	45%	40%	4.20
Discuss the use of reading strategies	1%	5%	23%	42%	29%	3.94
Model the use of reading strategies	1%	2%	15%	46%	35%	4.12
Memorize the reading strategies	3%	9%	26%	34%	37%	3.68
Support the use of reading strategies	2%	4%	18%	45%	32%	4.01
Independent performance	2%	5%	19%	43%	31%	3.97

Note. (Questionnaire scale: 1 = never, 2 = rarely, 3 = sometimes, 4 = often, 5 = always)

In the development of background knowledge, the mean is 4.20. In this stage, more than half number of teachers frequently identified students' knowledge and skills needed to successfully learn the strategy. In the next stage of SRSD, teacher and students discuss the reading strategy. The mean 3.94 indicates that teacher and students go over the reading plan. With regards to the modelling of the use of reading strategies, it was confirmed that most of teachers realized the significance of effective modelling which assists the students to see the expected outcomes, particularly in utilizing reading strategies and self-regulation procedures. The mean in the modelling of the use of reading strategies reached 4.12. Most teachers were also aware to help the students in memorizing the reading strategies (M=3.68) and their personalized self-instructions which was also manifested in teacher's support to allow the students' practice the reading strategies (M=4.01). The majority of teachers also encourage

the students to get involved actively by using the reading strategies independently (M=3.97). Despite the widely accepted teachers' involvement to embrace all stages of SRSD in reading instruction, there were some teachers who failed to play the roles in reading instruction. The next section addresses the factors that explain the use of SRSD in online EFL reading instruction.

Factors which influence EFL teachers' perspectives on the use of SRSD in online EFL reading instruction

Responses from interviews were thematically coded in order to generate the pattern referring to the related construct. The results of analysis of the factors influencing the teachers' use of SRSD in online EFL reading instruction are presented in Table 6.

Table 6.

Factors Contributing to teachers' role in SRSD online reading instruction

	Learning mode factors	Individual factors	Instructional support factors
Develop background knowledge for reading	• Identifying students' pre-existing knowledge through brainstorming session with open-ended discussion in online environment is quite a challenge.	• Students with different literacy rate perceived different background knowledge in the subject of reading.	• Teachers' ability to conduct test or quiz to uncover students' background knowledge.
Discuss the use of reading strategies	• The online environment limits the classroom interaction with teachers or peers.	• High-achieving and low-achieving students hold different relationship with teachers or peers.	• Teachers' ability to organize classroom activities which leads to classroom interaction.
Model the use of reading strategies	• Online environment with the available learning platform can assist teacher to model the use of effective reading strategies.	• Students' self-efficacy and interest determine their engagement in modelling activity.	• Teachers' knowledge to demonstrate the procedures in utilizing strategies in online reading.
Memorize the reading strategies	• Asking students to develop reading habit, particularly in online environment to assist the students memorize the strategy.	• Students with different levels of proficiency have different level of working memory.	• Teacher provides prompts for students who have difficulty with memorization.
Support the use of reading strategies	• The use of strategy in online reading is suggested to contribute to the significance of independent study.	• Students with different levels of proficiency and interests have different perceptions for using reading strategy and self-regulating procedures on their online reading.	• Teachers monitor students' progress in utilizing the strategies.
Independent performance	• Asking students to read several digital texts independently and to practise the strategy for exposure.	• Students with different levels of proficiency have different level of self-regulation procedures.	• Teachers' ability to encourage the students to work independently.

Table 6 described factors that could affect how teachers perceive the use of SRSD in online EFL reading instruction. The analysis revealed that teachers addressed factors that lead to six stages in SRSD. Factors that fell under each stage of SRSD were coded into three categories: learning mode factors, individual factors and instructional support factors.

In background knowledge development, teachers reported that assessing students' background knowledge helps teachers understand what their students need to learn and how to apply the strategy through the SRSD stages. Background knowledge belongs to the initial stage needed to apply the reading strategy which enables the students to make connections and bring information or knowledge to their reading. Background knowledge development is often conducted through brainstorming session and other activities which are situated within teacher-student interaction in classroom. However, the feature of online classroom which is different from conventional classroom environment limits the teacher-student interaction. The lack of face-to-face communication in online classroom would lead to teachers having difficulties to engage in conversation and identify individuals' background knowledge from reading. Teachers pointed out in the following excerpt.

> *In most cases, students tend to have low reading ability and reading interest. [...] it is difficult to see what students already know about the subject matter. (T2)*

> *It is not easy to get students participate for discussion in brainstorm session, let alone in online platform. [...] students kept their cameras turned off and they barely to speak [...] some willing students were quite enthusiastic to express their ideas, but not with students with low literacy skill. (T3)*

This situation linked with students' literacy rate where students with high-level literacy skill were equipped with abundant knowledge which made them better comprehend the issues regardless the online learning mode, whereas students with low-lever literacy skill struggled to keep up with background knowledge development due to their inadequate knowledge. As a result, students with low-literacy skill might not be able to fully participate in the stages of reading activity which could lead to boredom and demotivate students. Hence, instructional support factor is essential as it offers practical classroom strategies framed within encouraging activities to tie to individual's existing knowledge base.

As portrayed in Table 6, online mode factor influenced teachers' involvement in online reading instruction including discussion on reading strategies. Limited access to teacher-student interaction in online learning might disrupt the discussion on how to promote students' motivation and help students understand the importance of reading strategy. T1 highlighted:

Engaging students in online classroom interaction is crucial. As a teacher, I have to be creative to facilitate students' participation through interactive classroom activities. [...] by having structured interaction, I can engage students more easily, explain the significance of reading strategies and encourage students to use them in online EFL reading. (T1)

In line with this, students with different levels of literacy skill perceived differently toward the discussion where students with higher level of literacy skill were likely to be more engaged in discussion and be more enthusiastic to employ the reading strategy they planned to use. Meanwhile, students with low literacy skill often found it uninteresting to connect with people. Most of them took the passive role as they relied heavily on the teacher-centered learning instead of being more active in collaborative role. Teachers' ability to plan classroom activities through various tasks and situations which could encourage students to apply the reading strategy is crucial.

Modelling the use of reading strategies becomes essential part as teachers explain the steps using materials (e.g., graphic organizers, charts) while implementing the online reading strategy. Despite the limited classroom interaction between teacher and students which might be established in online classroom, the classroom provides accessible online learning platforms which could be used to facilitate the teacher when modelling the strategy. T3 pointed out:

As a teacher, I conduct some coaching with supporting resources to provide an example on how to use strategies in online reading. [...] using well-structured strategies to better navigate online text will make students become better readers. (T3)

As mentioned before, individual differences on literacy skill determine on how they understand each step they use in implementing the strategy. In this study, SRSD in online EFL reading instruction included TWA (Think before reading, think While reading, think After reading) strategy where teachers' ability to demonstrate the steps in applying the strategy is significant in order to support students' mastery on TWA strategy. Some teachers believed that teacher professional development which is manifested in training for SRSD in online EFL reading instruction is necessary to expand their knowledge.

In memorizing the reading strategies stage, it appeared to be affected by learning mode factor. The research data revealed that teachers urge students to improve their reading habit which promotes their memorization to the reading strategy learned using various strategies as it is described by T5:

In my online classroom reading activities, I usually implement mnemonics, reading repetition, interesting activities such as watching relevant movie, songs, or body

movements to support my students' memory in using reading strategy. Further, I also provide some activities through worksheet, exercise and assignment to support their learning autonomy. [T5]

In online EFL reading context, teachers also encountered several challenges including limitation of the online pedagogical competence due to lack of professional development, teaching resources, and teaching community regarding SRSD in online EFL reading instruction. In term of individual factor, differentiated level of students' language proficiency influenced students' working memory. Thus, EFL teachers trained their awareness, self-regulation, and time management to accomplish learning goal settings. With regard to the instructional support factors, EFL teachers tried their best to train students to memorize the strategy.

Regarding the stage of supporting the use of reading strategies, teachers attempt to encourage students to employ reading strategies to foster their online reading skill. In this stage, teachers could not optimally use the SRSD in online EFL reading instruction due to several challenges including teachers' time limitation for preparing tasks and lack of teachers' capacity on online learning mode, whereas the individual factor was reported to give some influences, such as students' language level of proficiency, interest, preferences, and self-regulation strategies in reading. Despite its limitation, teachers simultaneously monitored students' progress through several activities and platforms when conducting pair tasks focusing student-student and student-teacher task types as it is described by T3:

For me, teaching reading in online setting is such challenging thing since I have to prepare academic needs before attending the class such as material preparation, media preparation, activity preparation, and individual task preparation which allow promote my students' learning autonomy in reading. [T3]

In the stage of independent performance, learning mode factor impacted the teachers to suggest and accommodate students to develop their literacy skills through numerous activities such as digital reading log, reading digital texts, reading multimodal materials, and extensive reading which were commonly conducted in virtual synchronous meetings, asynchronous agenda, structured time assignment, and time of independent learning for students. Although these academic practices were proceeded and well-engaged in online reading context, it could not reach the optimal result since students had not received self-regulated procedures in implementing online reading strategy. It implied that students run these reading activities based on teachers' recommendations and instructions without students' interest enhancement, performance self-talk, and environment structuring.

In my class, I found my students were not keen on self-regulation strategies; it is indicated from their awareness, initiatives, and internal motivation to explore on reading activities based on their needs outside of classroom activities, but then, the use of SRSD really helps me in creating interesting online reading activities to promote their autonomy [T1]

From the teachers' side, the challenges were found in the technological competence, such as monitoring their students in doing an independent performance in an online context and in utilizing relevant digital tools, also time limitation on checking students' progress due to their administrative needs outside of the teaching agenda. Therefore, the instructional support factor revealed that teachers tried to provide and facilitate students to work independently effectively by sharing digital texts, learning resources, and learning tips to create students' awareness and self-regulation strategies, particularly learning autonomy in an online reading context.

Discussion

Teachers' perception in the use of SRSD in online EFL reading instruction to foster autonomy in online reading

The first question in the present study concerned the teachers' perception of the use of SRSD in online reading instruction. The findings showed that the teachers perceive the use of SRSD at high level. The majority of teachers embraced the six stages of SRSD in online reading instruction. This indicates that the teachers frequently encouraged the students to participate in series of activities throughout the stages of SRSD to help them develop online reading strategies and comprehension skills. They became more aware on the significance of self-regulation strategies to increase students' understanding of planning, monitoring, and evaluating strategies. Bearing the above knowledge in mind, Teng (2020) pointed out that students were introduced to SRSD in order to help them understand the objectives and the significance of the interaction between students and teachers. In this study, there is strong evidence that students struggling with English literacy need teachers' support in the use of SRSD in online reading instruction in order to implement strategies and skills. This finding shed similar light with the previous studies which demonstrated that support from teachers in SRSD instruction indirectly influences students' self-regulated learning and reading skill (Hagaman et al., 2016; Morshedian & Hemmati, 2016; Oates, 2019; Zhou et al., 2022; Alreshoud & Abdelhalin, 2022).

As the frequency of distribution of teachers' acceptances toward SRSD reading instruction in online learning was high, the gap among teachers' perceptions was noticeable.

Few of teachers rarely make use of SRSD in reading instruction due to some reasons. One of the possible reasons is that reading online texts can be difficult to some students particularly those with low reading literacy rate as they must be able to navigate through key pieces of information in digital reading tasks. Training low-achieving students to use self-regulated strategies effectively can be challenging as students who were self-regulated took an active role in the learning process. Concerning the importance of teachers' competence in the instructional practices of SRSD in online reading instruction (Oates, 2019), the lack of teachers' training on SRSD practices emerges as a problem that might hinder teacher's involvement in SRSD instruction. In this study, the extent of teachers' involvement in SRSD in reading instruction is catalysed by their professional growth and the students' characteristics.

Additionally, it has been stated that practicing self-regulation in appropriate environment is a way to develop into competent autonomous students. Papamitsiou and Economides (2019) argued that fostering learning autonomy can be initiated by developing the abilities to self-regulate actions and tasks. The interplay between self-regulated strategies and students' exercise of autonomous control needs to be established in instructional condition in which teachers need to clarify the use of each stage of SRSD in the development of autonomous learning capacity. Students need to be provided opportunities to accept responsibility for and control over learning options. The effort in using regulation strategies is a strong determinant of the degree of autonomy among students (Papamitsiou & Economides, 2019).

Factors which influence EFL teachers' perspectives on the use of SRSD in online reading instruction

The present study also aimed to examine factors affecting EFL teachers' perceptions of the use of SRSD in online EFL reading instructions. The research findings report the three factors throughout six stages of SRSD online reading instructions. The qualitative data of semi-structured interviews revealed that the use of SRSD in online EFL reading instructions offers several beneficial input and comprehension to students such as students' self-regulation strategies, autonomy, and reading skill, while challenged in learning were encountered by both teachers and students.

The first factor is learning mode in the use of SRSD in online reading instruction. The whole processes of teaching strategies in online reading context emphasize the use of self-regulation procedures to boost students' learning autonomy through several activities both synchronously and asynchronously. This corroborates the previous findings (Ahangar, 2023; Sholeh, 2019; Rogers et al., 2020) which remain that the self-regulation strategies of cognitive,

metacognitive, motivational and socio affective dimensions provide span for promoting students' learning autonomy. Synchronously, SRSD classroom practices support student centred approach which also evidenced by greater result on students' reading skill (Jozwik et al., 2019; Sanders, 2020). While the practices on asynchronous reading activities offer students' significance contributions to learning atmospheres (Wong et al., 2019).

Notably, the second factor is individual factor which is derived from students' sides during classroom practices including students' language level proficiency. Students who have higher proficiency in reading absolutely devoting themselves with self-regulation strategies to achieve goal setting, reading target, and their performance (Handoko et al., 2019). Besides, self-efficacy is also important predictor to run various instructions from their teachers in online reading context which allow them to be efficacious students and highly motivated in the teaching and learning process. A study reported by Peura et al. (2019) reminds us that self-efficacy is needed by students to promote effective learning particularly in reading class. To create effective classroom atmospheres, students' preferences and interests (Kung, 2019) become teachers' consideration in transforming students' activities, facilitating students with differentiated instructions, and supporting their engagement in virtual classroom setting (Bondie et al., 2019)

The instructional support is the last factor influencing teachers' perception in the use of SRSD in online EFL reading instruction. Research findings reported that teachers' pedagogical and content knowledge in using SRSD in online EFL reading instructions were well-tracked; they transformed and use several strategies in the online reading class based on students' interests and needs regarding six stages. Unfortunately, the technological issue on the part of the teachers affected the online atmospheres during the teaching and learning process which was also experienced by Nuere and de Miguel (2021). Accordingly, professional development activities to facilitate teachers in using SRSD in online EFL reading instructions are needed to optimize the learning impact on reading field. This in line with previous research reported by McKeown et al. (2018) who mentioned that professional development may improve and refresh not only teachers' technological knowledge but also their pedagogical and content knowledge.

Conclusion

The findings of this study highlighted how teachers perceive the use of SRSD in online EFL reading instruction to foster students' autonomy in online reading and scrutinized the factors influencing how teachers use SRSD in online EFL reading instruction. Based on the analysis of quantitative and qualitative data, the majority of teachers devoted themselves to

enact their roles in the six stages of SRSD in online EFL reading instruction. Teachers as facilitators understood that it is essential to use SRSD in online EFL reading instruction to boost the students' autonomy in online reading. Despite their agreement to be involved in the use of SRSD in online reading instruction, some teachers failed to immerse themselves in the instructional practice. Responding to this issue, the study revealed that there were three relevant factors contributing to teachers' use of SRSD in online EFL reading instruction, namely learning mode factors, individual factors, and instructional support factors. The interplay among the three factors influenced how teachers used the strategies. The findings imply that teachers need to develop pedagogical knowledge in the use of SRSD in online EFL reading instruction through teacher professional development activities. The empirical evidence from this study also contributes to the future direction of SRSD studies, particularly in online EFL reading related to other language skills. Exploring the role of each stage in SRSD instructional model in EFL reading instruction toward students' higher degree of autonomy in online EFL reading requires a great deal of attention and should be further explored in future studies.

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APPENDIX

Item	Statements	1	2	3	4	5	Mean	Std. Deviation
1	Teacher identifies what background knowledge and skills needed to successfully learn the strategy.	2	0	10	28	20	4.07	.899
2	Teacher assesses whether or not the students possess the knowledge and skills.	1	1	4	26	28	4.32	.813
3	Teacher and students discuss the reading strategy and self-regulation procedures.	1	2	13	26	18	3.97	.901
4	Teacher and student discuss the students' current performance on the targeted skill.	0	4	15	24	17	3.90	.896
5	Teacher models the reading strategy in an authentic, enthusiastic and engaging way.	0	2	10	23	25	4.18	.833
6	Teacher models the reading strategy by including any prompt that will be available for students (graphic organizers, charts, etc.).	1	2	8	30	19	4.07	.861
7	Teacher shows students how to use the steps of reading strategy (e.g. TWA- *think before reading, think while reading, think after reading*) and effectively utilize self-regulation procedures.	2	3	13	27	15	3.83	.977
8	Teacher asks the students to think before reading such as thinking about author's purpose, what students know and what students want to know from reading text.	1	0	7	31	21	4.18	.770
9	Teacher asks the students to think while reading such as thinking about reading speed, thinking about linking knowledge and thinking about rereading parts.	0	0	13	26	21	4.13	.747
10	Teacher asks the students to think after reading such as thinking about the main idea, summarizing information and making reflection.	0	0	4	30	26	4.37	.610
11	Teacher asks students to participate in activities which help them memorize the strategy and their personalized self-instructions.	0	4	14	24	18	3.93	.899
12	Teacher provides prompts (cue card with steps) for students who have difficulty with memorization.	4	7	17	17	8	3.42	1.078
13	Teacher asks students to gradually take responsibility for using the reading strategy and self-regulating procedures.	3	5	13	23	16	3.73	1.103
14	Teacher provides differentiated levels of support according to students' progress.	0	0	16	26	18	4.03	.758
15	Teacher have students to be independent after reading several passages.	0	2	3	32	23	4.27	.710
16	Teacher asks students to use reading strategy and self-regulation procedures independently.	0	3	10	28	19	4.05	.832
17	Teacher and student continue to apply plans for generalization and maintenance to evaluate efficacy.	2	3	13	24	18	3.88	1.010