

## Scaffolding Self-Regulation in an Online English Language Course: Utility of Contract Learning

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### Abstract

As students' achievement is correlated with self-regulation, finding interventions promoting self-regulated learning (SRL) in online courses is a current focus of research. However, few studies have explored the potential of contract learning in scaffolding and developing SRL in non-traditional learners who have work and family and are at risk of dropout. Here, we investigate the utility of contract learning as an individualized learning approach in developing self-regulation in non-traditional learners during the COVID-19 pandemic. Using a qualitative approach, we collected data from the experience of one teacher and seven non-traditional learners in an online English for Specific Purposes (ESP) course. The data were collected from teacher logs over eight months and semi-structured interviews with the students. The results of deductive thematic analysis of the data indicate that contract learning positively affected the forethought, performance, and self-reflection phases. Further, despite the cognitive, emotional, external, motivational, and behavioral challenges aggravated by the pandemic, the teacher's efforts to implement contract learning affected the persistence and effort, goal setting, strategic planning, and time management of most learners ( $N = 4$ ). Possible reasons for the learners' success and failure and the implications for developing SRL skills in students at risk of dropout in online English courses are discussed.

**Keywords:** contract learning, self-regulated learning, scaffolding, online learning, English for specific purposes

Online language learning was already becoming the dominant form of language learning in the late 2010s (Dumford & Miller, 2018). With the COVID-19 pandemic and the closure of schools and universities, it became *the* solution to prevent disruption in education when in-class learning was no longer possible (Drane et al., 2020). This sudden change in educational systems worldwide highlighted the need to understand students' capabilities (Dhawan, 2020) and teachers' struggles in adapting their teaching approaches to new circumstances (Baker, 2020). More importantly, learners usually receive less support from their teachers or peers in online learning environments compared to face-to-face learning in the classroom (Broadbent et al., 2020). Therefore, students need to self-regulate their learning, use time-management skills, and show more persistence (Broadbent, 2017; Kizilcec et al., 2017). However, many students have poor SRL skills, hence the need for targeted support and scaffolding (Bol & Garner, 2011). Therefore, some educators took various measures to address this problem and support their students' self-regulation. According to a meta-analysis by Theobald (2021), SRL training programs are effective at helping students develop SRL strategies and motivation and improve academic performance. However, there is a dearth of qualitative, in-depth investigations of in-context SRL scaffolding support strategies and language learners' self-regulatory behaviors in online language learning environments (Rasheed et al., 2020; Rose et al., 2018; Teng & Zhang, 2021; Wong et al., 2019).

Here, we explore a less studied approach, namely contract learning, to promote SRL among adult university students in an online course with synchronous and asynchronous components. Contract learning (Davidson, 1984; Jin et al., 2020; Knowles, 1986; Lan et al., 2020; Moon, 2004; Zandi et al., 2015) is a technique that can promote SRL and learner autonomy by providing individualized attention and support. In contract learning, the learner and the teacher make a contract that includes an individualized plan of action, clarifying their responsibilities toward attaining the negotiated learning goals. More specifically, contract learning consists of three main phases: goal setting, performance, and evaluation. During each phase, the teacher provides support and feedback to the learners (Knowles, 1986). These three steps coincide with the three phases of self-regulation (i.e., forethought, performance, and self-reflection—Zimmerman, 2000). Notably, teachers can mentor learners, monitor their progress, and provide scaffolding<sup>1</sup> support to foster self-regulation in contract learning.

Contract learning aligns with previous studies highlighting the importance of proper individualized care and support, especially in developing SRL skills in online learning environments (Carter et al., 2020; Wong et al., 2019). Previous studies have shown the positive impact of contract learning on university students in face-to-face classes (Zandi et al. 2015; Jin et al. 2020) and on primary school students' self-regulation in online communities (Lan et al. 2020). However, to the best of the researchers' knowledge, no study has investigated the impact of contract learning on non-traditional learners who have lower retention and persistence rates (Rovai, 2003) in an online ESP course. Notably, Theobald (2021) maintains that investigating adaptive and individualized approaches for fostering SRL while considering "intra-individual differences in SRL" is of utmost importance (p. 16). As SRL dynamically changes in each classroom session (Theobald, 2021), considering the intra-individual differences in teaching can provide the personalized care and support learners need in online learning. Considering the challenge of "personalized teaching and learning" in online environments and the need to provide "personal attention" to students in this learning mode to ensure their adaptation at the time of crisis (Dhawan, 2020, p.4), there is a need for approaches that can enable both teachers

and learners to monitor the learning process (Moorhouse & Kohnke, 2021). Thus, the present study follows this line of thought and explores the potential of differentiated support adapted to each learner's needs (Theobald, 2021) using contract learning. The current study also answers the call for the necessity of monitoring learners' learning process and ensuring "regular human interactions" during COVID-19 (UNESCO, 2020; Drane et al., 2020).

Bol and Garner (2011), investigating the challenges of developing SRL skills in learners with limited SRL and calibration skills, suggest scaffolding as the needed form of support for fostering SRL skills in these learners. Furthermore, in the literature on second language learning, there has been a shift of emphasis from "product—the actual techniques employed—to the self-regulatory process itself and the specific learner capacity underlying it" (Tseng et al. 2006, p. 81). However, there is a lack of research on the effectiveness of contract learning in the process of providing the necessary scaffolding to promote SRL. Consequently, the current study used a qualitative approach to study different scaffolding strategies, adaptations, and SRL development in the learners using contract learning during the pandemic. It adopts an event-based and cyclical view (Winne & Perry, 2000) of SRL to describe the actual cyclical process through which learners are guided to move along the phases of forethought, performance, and self-reflection to become self-regulated learners. The study considers the three widely recognized premises of self-regulation, according to which self-regulation is intentional and goal-directed, has a metacognitive component, and involves behavioral, cognitive, or motivational regulatory processes (Hadwin et al., 2011).

The current study contributes to the ongoing discussion in the literature on these issues and answers the call in the field (Dörnyei, 2005; Rose et al., 2018; Teng & Zhang, 2021). The present study aims to address the following research question:

How did the scaffolding support provided by a teacher using contract learning lead to SRL development in non-traditional ESP learners?

## **Review of the literature**

Shifting to synchronous and asynchronous technology-enhanced online learning environments offers a host of opportunities, such as greater flexibility in attending classes. It also comes with the corollary of reduced interaction between the teacher and the student, a lack of structured and fixed timetables (Broadbent, 2017), an elevated sense of anxiety in academics and instructors (Vandeyar, 2021), and the challenges of digital availability and equality (Dhawan, 2020). These challenges can be exacerbated, especially during a pandemic when online education becomes the only option for many universities. To address some of these challenges, learners should be able to manage, control, and undertake their studies autonomously and, in particular, self-regulate their learning (Broadbent & Poon, 2015; Rasheed et al., 2020). In this section, an overview of the literature on SRL will be provided, and then the role that contract learning can play in this process will be explored on a theoretical level.

### **Self-regulation**

Zimmerman defines SRL as "self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals" (Zimmerman, 2000, p. 14). The concept

of self-regulation, a well-established construct in educational psychology, has also been introduced to second and foreign language learning (Dörnyei, 2005). Accordingly, self-regulation has attracted considerable attention, and recent studies have called for research focusing on SRL in second and foreign language learning (Griffiths, 2020; Rose et al., 2018; Teng & Zhang, 2021).

### **SRL models**

Previous studies in the field of educational psychology have developed various SRL models and frameworks (Boekaerts et al., 2000; Hadwin et al., 2011; Pintrich, 2000; Winne & Hadwin, 1998; Zimmerman, 2000) to understand the role of cognition, motivation, and emotion in SRL (Panadero, 2017). The phases of regulated learning have been depicted differently in various SRL models (e.g., Pintrich, 2000; Winne & Hadwin, 1998; Zimmerman & Moylan, 2009). However, the three phases of preparation, performance, and appraisal (i.e., reflection, regulation, and adaptation for the future execution of the task) thread the scholarly literature (Puustinen & Pulkkinen, 2001).

Zimmerman (2000), following the social cognitive theory of Bandura (1986), considers self-regulated learning as a cyclical, interrelated process with forethought, performance, and evaluation or reflection phases adapted for achieving goals. Self-regulation in Zimmerman's model has been regarded as a feedback loop where the personal, environmental, and social feedback that the learner receives is used for making adaptations (Zimmerman & Moylan, 2009). Learners' beliefs and their feelings, such as goal orientation, interest or value, self-efficacy, outcome expectations or future time perspectives, causal attributions, and self-reactions, constitute the motivational sources in SRL. These motivational sources result in motivational outcomes and affect learners' attention, choice of task, effort, and persistence in the initiation, performance, and sustaining of the learning process (Zimmerman, 2011; Zimmerman & Schunk, 2011).

According to Zimmerman and Moylan (2009), the motivational sources and self-regulation processes include: a) a forethought phase with goal setting, strategic planning, self-efficacy, outcome expectations, task interest or value, and goal orientation; b) a performance phase with task strategies, self-instruction, imagery, time management, environmental structuring, help-seeking, interest enhancement, self-consequences, metacognitive monitoring, and self-recording; and c) a self-reflection phase with self-evaluation, causal attributions, self-satisfaction, and adaptive or defensive decisions. The present study uses the contract learning approach for instruction and leverages Zimmerman and Moylan's (2009) version of the SRL cyclical model for data analysis.

### **SRL Studies**

“Although it is possible to develop self-regulatory competence by personal discovery, this path is often tedious, frustrating, and limited in its effectiveness” (Zimmerman, 2000, p.28). Therefore, scaffolding, which is a process that a teacher enables the learner to complete a task or achieve goals through “controlling” those elements of the task that are initially beyond the learner's capacity” (Wood et al., 1976, p. 90) is crucial for SRL development. Previous studies on supporting SRL have highlighted the impact of guided scaffoldings and direct strategy instruction on learning processes in contrast to providing minimal guidance during instruction

(Kirschner et al., 2006). Carter et al. (2020) have also emphasized the moderating effect of guided scaffolding in online environments on decreasing the cognitive load of the working memory, considering the metacognitive needs of SRL processes. Similarly, in a systematic review of classroom observation studies, Dignath and Veenman (2021) showed the influence of providing a structured learning environment conducive to practicing SRL and direct strategy instruction on SRL development. However, they found that teachers did not activate self-regulation in all SRL phases.

Further, Spruce and Bol (2015), examining elementary and middle school teachers' knowledge, beliefs, and SRL practices, showed that the teachers' SRL support was mainly restricted to the monitoring phase. The authors concluded that when designing SRL interventions, motivational and metacognitive strategies and other SRL phases (i.e., planning and evaluation) should be considered. Therefore, there is a need to investigate approaches that support multiple SRL processes and tailored scaffolding<sup>1</sup> (also known as individualized scaffolding) (see Wong et al., 2019) while considering human factors. Moreover, attention to human factors (e.g., cognitive abilities, prior knowledge, expertise, learning preferences, and motivation) (Wong et al., 2019) and providing individualized scaffolding (Bol & Garner, 2011; Dignath & Veenman, 2021) are instrumental in learners' SRL development.

Previous studies have shown the positive impact of regulation on online learning and have emphasized the importance of providing individualized scaffolding. For example, Cho and Shen (2013) investigated the mediating effect of metacognitive regulation, interaction regulation, and effort regulation on intrinsic goal orientation and academic self-efficacy in an online course. The authors emphasized that as self-regulation determines academic achievement in online learning, monitoring learners' progress and scaffolding students' SRL are crucial. Similarly, in a qualitative study, Hromalik and Koszalka (2018) investigated community college students' online self-regulation behaviors in an asynchronous language course. The study concluded that providing scaffolding support for monitoring language learners' study techniques, performance, time management, and motivation could be helpful. However, studies have not paid enough attention to the causal factors (e.g., persistence, motivation, and external emotional factors) behind SRL challenges in online environments (Rasheed et al., 2020).

As previous review studies have also shown, prompts and teachers' effective feedback practices are beneficial in fostering SRL (Dignath & Veenman, 2021; Wong et al., 2019). Teachers' effective feedback can also influence learners' motivation and self-efficacy (Hennebry-Leung & Xiao, 2020). According to Bielak and Mystkowska-Wiertelak (2020), teachers' learner-directed emotion-regulation strategies, such as cognitive change, competence enhancement, and situation modification, can effectively influence learners' emotional self-regulation. Therefore, these studies unanimously show that effective individualized scaffolding during all SRL phases while considering learners' needs is essential in supporting and activating SRL in online environments. Moreover, most SRL studies have been conducted in subject domains other than English (Dignath & Veenman, 2021; Wong et al., 2019). The relatively limited number of studies in second and foreign language learning have mostly used quantitative or mixed-method designs (Bielak & Mystkowska-Wiertelak, 2020; Cho & Shen, 2013), and there has been little qualitative analysis of SRL behaviors of language learners in online environments (e.g., Hromalik & Koszalka, 2018). To fill this gap, the current study uses contract learning to provide scaffolding support and foster self-regulation in all SRL phases.

## **Self-regulation and contract learning**

The need for feedback and structured scaffolding support in SRL models foregrounds the individual needs of the learners. Individualization of instruction aims to develop self-directed, empowered, agentive, and responsible learners (Chastain, 1976; Dörnyei & Ryan, 2015; Knowles, 1975; Larsen–Freeman, 2019; Lemieux, 2001; Parkhurst, 1922). Notably, “students’ own active and creative participation in the learning process through the application of individualized learning techniques” can have a determining role in fostering language attainment (Dörnyei & Ryan, 2015, p.5).

Making learners responsible for their learning process while recognizing their individual cognitive and emotional needs can form the basis of a learning contract between the teacher and learner. The contract takes into account the learner’s goal, teacher’s roles, learner’s roles, the objectives of the course, teaching methods, study plans, instruction, and assessment criteria (Boone et al., 1979; Knowles, 1975; Lan et al., 2020; Lemieux, 2001) and creates a roadmap where the responsibilities of the teacher and the learner are made explicit. It acknowledges that learners have diverse needs that cannot be addressed by a one-size-fits-all type of instruction (Boone et al., 1979; Gilbert, 1976).

To date, a few scholars have used contract learning to scaffold language learning, cater to individualized attention, and prompt more accountable learners (Davidson, 1984; Jin et al., 2020; Knowles, 1975; Moon, 2004; Zandi et al., 2015). Among the studies conducted on contract learning, Zandi et al. (2015) investigated the efficacy of contract learning in helping foreign language learners attain their learning goals in a face-to-face English for academic purposes (EAP) course. The results indicated that it helped develop grammatical knowledge among adult learners. Furthermore, there was a positive impact on the learners’ studying behavior and attitudes toward this approach. Jin et al. (2020) examined the effect of contracting university-level students’ speaking on reducing their classroom anxiety in a face-to-face environment and further explored their attitudes toward contract learning in a 1-week contract and non-contract groups. The results suggested that implementing contract learning for speaking skills decreased anxiety in the class. Moreover, the data from the diaries showed that contracts increased students’ engagement, self-efficacy, and self-reflections and led to positive emotions. In another study, Lan et al. (2020) explored the effect of an online community of contract learning on fostering the learners’ motivation, self-regulation, and academic achievement. The results showed that utilizing contract learning in an online community increases learners’ achievements, motivation, and self-regulated learning skills.

While scaffolding has attracted considerable attention in developing self-regulated learners, hardly any studies have focused on the role of contract learning in providing adaptive support (i.e., individualized support adapted to the learners’ needs) in language learners’ SRL development during COVID-19. The current study uses Zimmerman and Moylan’s (2009) widely used cyclical model to study the scaffolding support provided to learners by contract learning. The model holds a goal-oriented and constructive view of the three phases of interrelated feedback loops and provides “a robust, explanatory lens” (Moos & Ringdal, 2012, p.10) as it describes the SRL subprocesses in more detail while considering the motivational and emotional aspects (Panadero, 2017). More specifically, the present study investigates learners’ cyclical SRL development against the backdrop of the challenges caused by the

sudden shift of all in-person classes to online mode due to the outbreak of COVID-19. It further attempts to provide deeper insights into how and why contract learning works differently for learners, considering their individual differences.

## **Methodology**

### **Research design and context**

The present study used contract learning to scaffold the dynamic process of fostering self-regulation in seven non-traditional learners. It sought to answer how a teacher's scaffolding support led to SRL development over eight months. The current study has a qualitative approach and is conducted in the context of a higher education institute in Iran. The decision to conduct the study was reached after considering its potential to allow the practitioner-researcher to intervene and improve the learning process hindered by the COVID-19 pandemic. Similar to other institutions in the world, we were concerned with the issues of a sudden shift to the online mode and learners' needs. Considering the weak infrastructure of the online platforms in the country (e.g., low bandwidth and low connection speed), it was ethically incumbent upon the instructors to find a way to prioritize undisrupted education and ease of use at the time. After reflecting on these issues with the supervisor of the program and the learners, WhatsApp was chosen as the platform for the class. The learners were already familiar with the platform and preferred it as they experienced fewer Internet connectivity issues with it. However, early in the course, it appeared that the lack of self-regulation was a significant contributing factor to a high rate of student absenteeism.

Consequently, contract learning was chosen as a viable approach to lend scaffolding support to learners' SRL. Data were collected throughout the course to systematically document the effect of contract learning on the learners. The current study has focused on one instructor and seven learners' experiences. The instructor was an advisor, resource provider, curriculum developer, tutor, consultant, and outcome evaluator during this course.

### **Course design and learning resources**

The course aimed to prepare students for understanding and translating texts and articles in their field. The materials used during this course included the Market Leader book series<sup>2</sup> and business articles chosen by the instructor. This research employed a contract between the learners and the teacher to support the learners in pursuing their learning goals and becoming self-regulated learners. To meet all the requirements of online contract learning and to tailor this course to individual learners' needs, learners and the teacher agreed on the time and days of one-on-one online sessions. Since some students did not have high-speed and high-quality Internet access, video or group calls were out of the question. Learners had online classes with their teacher separately, once a week, for 20 minutes each session for eight months through real-time voice and text messages and media sharing in WhatsApp. The dedicated time for each student was increased halfway through the course to 30 minutes as the teacher and students mutually agreed that they needed more time.

It was an online course with synchronous and asynchronous components. In other words, students had to asynchronously study the materials and complete assignments that were sent to

them before the sessions—according to the contracts—and had to participate in synchronous sessions. The lesson plan of each synchronous session was based on the three phases of contract learning, namely goal setting, monitoring the performance, and evaluating, which aligned with the SRL phases. More specifically, the lesson plan for each session consisted of giving instructions, responding to the learners' questions on the section they had studied during the week, providing feedback on their assignments, and setting goals for the following session. The participants' learning outcomes were assessed in the middle and at the end of the course through written and oral examinations. The teacher also assessed their learning throughout the course during the sessions and adapted the scaffolding accordingly.

Considering the learners' cognitive and emotional needs, diverse learning paces, and proficiency levels, only one part of the online sessions was the same for everyone. The rest of the session was adapted and customized to each learner's needs according to the contract learning approach. In other words, the instructions for each session were the same. However, the other parts of the session that included feedback, answering their questions, and explaining upon the learners' requests differed for each learner. Also, following the terms of contract learning, the teacher provided flexibility for the learners' varied pace of learning. In other words, some learners did not keep pace with the pre-specified syllabus (e.g., some learners with a slower learning pace were behind the syllabus). However, the teacher tried to help them catch up with the rest of the class in time for the midterm and final exams. As for the asynchronous component, the teacher sent the text and audio files related to their weekly lessons. The learners had to go through the material before their synchronous lessons.

### **Participants**

The study was conducted on one practitioner-researcher and seven English language learners (six male and one female student) and took about eight months. The learners' ages ranged between 27 and 52. The learners were marketing students and took an English for Business Purposes course as part of their M.A. program. The learners were at the lower-intermediate to intermediate proficiency level and had one-on-one sessions with their teacher using WhatsApp messenger. The participants of the current study were non-traditional learners. Online non-traditional learners are adults with work, families, and responsibilities who study in online courses, and their ages usually range between 25 and 50 (Moore & Kearsley, 2005, as cited in Stephen et al., 2020). Non-traditional learners have a higher risk of dropping out of educational programs than students who are not burdened with work and family responsibilities (Bawa, 2016; Wladis et al., 2016). The change caused by the pandemic in their lives and the shift in the mode of instruction only increased this risk as their class attendance and discipline declined. The participants gave their informed consent to take part in the research. Pseudonyms have been used in reporting the results. Table 1 presents the profile of each participant.



**Table 1. Profiles of the participants**

Name	Gender	Age	Previous English Classes
Learners H	Female	27	Less than six months
Learner N	Male	31	Six months
Learner D	Male	33	N/A. Mostly self-study
Learner Y	Male	35	N/A
Learner A	Male	44	N/A
Learner R	Male	45	N/A
Learner Z	Male	52	One year

**Note:** N/A indicates that the participant has not attended any English language classes for many years prior to enrolling in the graduate program.

### Data collection and analysis

**Teacher logs.** The study used teaching logs “to capture significant reflections and events in an ongoing way” (Burns, 2010, p. 89). The teaching log incorporates events and the practitioner-researcher’s reflections, beliefs, histories, and pedagogical insights (Burns, 2010). The teacher reflected on contract learning, the learning process, events, the learners’ progress, and her feelings and beliefs and recorded them after each session. The entire teacher log during the eight-month course consisted of approximately 34000 words.

**Semi-structured interviews.** Semi-structured interviews were conducted with each learner in their L1 after the course. Each interview lasted between 45 minutes to one hour. The interviews were conducted online and according to the interview protocol (Ary et al., 2019). Consent was also obtained from each participant before recording the interview sessions. The interview sought participants’ opinions regarding their experiences during in-person and online contract learning classes. It further explored their attitudes and perceptions about the learners’ progress throughout the course.

### Data analysis

The qualitative data of the current study were analyzed using deductive thematic analysis based on a priori themes. The deductive thematic analysis facilitated identifying the SRL processes within the data using Zimmerman and Moylan’s (2009) cyclical model. Initially, the first author analyzed the data. Then, to ensure the credibility of the analysis, using peer debriefing (Ary et al., 2019), the process was reviewed and screened by the second author to look for possible evidence of bias. The researchers held several meetings to discuss and resolve the problematic issues and were able to reach an agreement. The second round of analysis included several steps, during which the first author kept a “reflective log” (Ary et al., 2019, p. 457). First, the data were transcribed and read thoroughly for initial familiarization. Second, the initial “theory-driven” codes for the data were generated (Braun & Clarke, 2006, p. 88). Third, codes were collated using the cyclical model (Zimmerman & Moylan, 2009). Then, all the themes were reviewed carefully. The fifth stage did not include naming or defining the themes. Instead, as

suggested by Braun and Clarke (2006), the subthemes of the cyclical SRL model for which there were not enough data in the dataset (i.e., outcome expectations, goal orientations, imagery, self-consequences, and self-instruction) were not included. The data from the teacher log and interviews were triangulated and analyzed together to increase the dependability of the results and identify any possible discrepancies. More specifically, the teacher's scaffolding support and the observed SRL behaviors of the learners in the teaching logs were triangulated with the learners' semi-structured interviews. There was no discrepancy between the teacher's logs and the learners' opinions and views in the semi-structured interviews. In the last stage, the data were analyzed for the last time while considering the research question of the study to produce the final report.

### **Researcher's positionality**

The researchers in this study were experienced and professional English as a Foreign Language instructors. They were familiar with the context of the higher education institute and its students, having worked there for a few years prior to the study. They were also familiar with the participants prior to the study. The first author, the practitioner-researcher, taught ESP to the participants, and the second author was the supervisor of the English program at the institute. They were concerned with how they could ensure the quality of the education students received during the COVID-19 pandemic. As the students struggled with self-regulation in online classes, they decided to use contract learning and study how it could increase students' self-regulation. The researchers were already familiar with the literature on contract learning and the need for self-regulation in online learning. However, they were interested in exploring how contract learning would serve the students during the difficult times brought about by the pandemic and when online learning was too sudden a shift for the learners. To develop an in-depth understanding of how contract learning could work in this context, they tried to have prolonged exposure to the phenomenon under investigation, which allowed them to observe and document changes in the students' self-regulation systematically over several months as the first author kept regular weekly logs reflecting on each student.

### **Findings and Discussion**

The study explored adult English language learners' SRL development using contract learning as a platform for the teacher's scaffolding support. The thick qualitative analysis of the data indicated that most learners (N = 4) developed SRL skills in the forethought, performance, and self-reflection phases during the online course. Table 2 presents an overview of the participants' SRL development. The data relating to each SRL phase will be presented and discussed in the following sections. The possible reasons for learners' success (N = 4) or partial to complete failure (N = 3) in attaining SRL skills are discussed below.

**Table 2. Observed SRL strategies based on Zimmerman and Moylan’s (2009) cyclical model**

The observed SRL strategies		Learners						
		H	D	A	R	N	Z	Y
<b>Forethought</b>	Goal setting and planning	+	+	+	+	-	-	-
	Task value/interest	+	+	+	+	-	+	-
	Self-efficacy	+	+	+	-	-	-	-
<b>Performance</b>	Monitoring	+	+	+	+	-	-	-
	Help-seeking	+	-	+	+	-	-	-
	Time-management and commitment	+	+	+	-	-	-	-
	Environmental structuring	+	+	+	+	-	-	-
<b>Self-reflection</b>	Self-judgement (self-evaluation)	+	+	+	+	+	+	-
	Self-judgement (causal attributions)	+	+	+	-	-	+	-
	Self-reaction	+	+	*	*	-	-	-

*Notes*

+ Developed: The SRL strategy was developed in the learner.

- Not developed: The SRL strategy development was not observed in the learner.

\* Partially developed: The SRL strategy was partially developed in the learner.

**Forethought**

Forethought is the first phase in Zimmerman and Moylan’s (2009) cyclical model. It consists of task analysis and self-motivation beliefs. Task analysis is the preliminary step taken by the learners who engage in the SRL cycle and consists of goal setting and strategic planning. It is followed by self-motivation beliefs, including task interest/value and self-efficacy subthemes.

**Task analysis: Goal setting and strategic planning.** Contract learning created an environment conducive to the forethought phase in SRL whereby learners got involved in task analysis (i.e., goal setting and strategic planning) and were motivated by the teacher’s support. As previously mentioned in the methodology section, the teacher assigned goals for all learners and prompted them to strategically plan their learning process at the end of each session, which ultimately led to improved goal setting and time management skills in most learners (i.e., four out of seven).

For example, Learner R, a 45-year-old father with a hectic life schedule who worked in a bank, “*was busy attending a work-related workshop in another city, and he couldn’t do the assignments,*” the teacher recorded in her log. She provided pacing support and extended the deadline to reduce the cognitive load, prompting the learner to set a strategic plan to send the assignments later. The teacher also provided further support and sent him voice messages about the new lesson so that he could listen to them at his leisure. “*The learner accomplished his goals and sent me both assignments,*” the teacher reported in her log. In order to complete any assignment, the learners are required to plan individually and strategically in the forethought

phase. Therefore, in the data analysis process of this study, when the participants acted on the teacher's goal setting and planning and completed their assignments, it was inferred that they had cognitively performed individual planning and goal setting. The teacher observed that he developed help-seeking skills (See help-seeking below) in the following sessions. The improvement observed in most of the participants in the study resonates well with the literature on the positive influence of proximal goal setting (Locke & Latham, 2002; Zimmerman, 1989) and having a plan of action (Bruso et al., 2020) on learners' goal commitment, goal setting and planning, and effort initiation in the forethought phase. The findings also suggest that providing a self-paced learning environment, goal setting, and one-on-one scaffolding support and communication can lead to classroom engagement (e.g., higher attendance rate, assignment completion, and commitment) in online learning classes, especially in at-risk students with low self-discipline. As described in the literature, setting specific, short-term, and attainable goals (Locke, 2018; Schunk & DiBenedetto, 2020) and providing pacing flexibility (Carter et al., 2020) are vital strategies in online learning, especially during COVID-19.

Further, the data showed that contract learning and individualized scaffolding support changed the attitude of Learner H toward online contract learning and resulted in an optimal form of goal setting and planning. She was a 27-year-old with a full-time job and had a previous negative experience with English classes. After a few weeks, during which she struggled with attendance and assignments, she gradually tried to assume more responsibility for her learning, as evidenced by the timely completion of weekly assignments. This outcome was due to the teacher's follow-up and the provision of emotional scaffolding support, and the use of a pacing support strategy. The accomplishment of proximal goals increased her self-efficacy and influenced her task choice as she asked the teacher to suggest her complementary study material (See also self-efficacy).

Contrary to the positive influence of the contract learning approach on most learners, the scaffolding support and assigned goals did not improve goal setting and planning skills in three participants (Learner N, Learner Y, and Learner Z). A likely explanation for such a result is Learner Y and Learner N's preferences and Learner Z's poor time management, which was exacerbated by the pandemic. Also, these learners had a negative attitude toward online learning, as further explained in the following sections.

**Task value/interest.** Prior studies have noted the importance of individual and situational interest in learning and motivation (Hidi, 2001). Since the learners were motivationally challenged during the program mainly due to the pandemic, maintaining motivation and task interest became a problem for the teacher and the learners. Mainly, class attendance was an issue. The teacher knew that some students (i.e., learners Y and Learner Z) were more prone to resort to defensive mechanisms such as procrastination, task avoidance, and absenteeism when they encountered challenging situations in their lives (See also self-reaction). Therefore, using an interest enhancement strategy, the teacher tried to select materials she "*hoped would pique their interest.*" Particularly, she tried to increase their situational interest, hoping that the students would start attending the class more regularly. Although the interest enhancement strategy is a self-control strategy in the performance phase, in this case, the teacher used it as a motivational source in the forethought phase to increase the learner's interest.

Except for Learners N and Y, other learners expressed their favorable views toward the content of the chosen reading materials and assignments. For example, Learner A, a 44-year-old father with a heavy workload, mentioned that "*the articles and books that were related to our field of*

*study were more interesting for me.*” Further, the course aimed at preparing the learners to translate and understand the articles in their field. During the interview, Learner A mentioned he was *“learning new vocabularies and at the same time new things about my job.”* This result corroborates the findings of previous studies on text-based situational interest (Hidi, 2001; Hidi and Renninger, 2006; Schraw & Lehman, 2001).

Even Learner Z, the 52-year-old father with a full-time job, said, *“I looked at the articles you sent me, and I think they are interesting.”* Learner Z’s behavior and comment showed the positive impact of the teacher’s interest enhancement strategy (e.g., providing materials that were relevant to the learners’ field of study and work) on triggering his situational interest and adaptive decisions as he chose to return to the forethought phase. However, the situational interest of the learner was not maintained, and he resorted to absenteeism (See self-reaction for an explanation).

Unlike other students, Learners N and Y did not develop an interest in the reading and translation tasks. Learner N, a 31-year-old man with a previous negative experience of studying English for six months and dropping out, said that *“I didn’t like translating the articles. I was more interested in the Market Leader book series.”* In addition, he believed that face-to-face classes were more effective for him than online classes. Learner Y was a 35-year-old father with a full-time job dealing with external motivational challenges. He resorted to task avoidance and absenteeism despite receiving the same scaffolding support from the teacher, possibly due to demotivation and a negative perception of online learning. He felt that *“he cannot learn with the online learning method.”* He preferred face-to-face classes and mentioned, *“I can’t learn like this.”*

Learners’ preferences for the instruction delivery format can directly influence their satisfaction with the online course (Bruso et al., 2020; Jaggars, 2014). The lack of satisfaction can partially explain the two learners’ decreased motivation in the contract learning course and their defensive reaction to the teacher’s scaffolding support throughout the course (See self-reflection). It should be taken into account that individuals vary in many respects (e.g., learning preferences, age, prior knowledge, expertise, motivation, and cognitive abilities). Therefore, human factors and learning mode preferences influence learners’ perceptions and persistence in online learning. As Lemay et al. (2021) have discussed, examining the influence of changes in the delivery format on perceptions, predispositions, and outcomes is crucial.

**Self-efficacy.** Self-efficacy beliefs directly influence a learner’s goals, task choice, and persistence in the performance phase (Zimmerman, 2011). In this study, contract learning improved the self-efficacy beliefs of three learners (i.e., Learners H, A, and D). For example, the teacher noticed that Learner H had difficulty comprehending parts of the readings. She provided pacing support (e.g., by dedicating one more session for a particular unit) and encouraged goal setting and planning. The scaffolding gradually improved Learner H’s goal accomplishment and increased her self-efficacy in the following sessions, as the learner mentioned: *“translating was very hard for me before but...I can now translate easily.”* Learner H’s autonomous choice of the task and her engagement in activities beyond the scope of the syllabus in the following sessions shows the positive impact of the increased self-efficacy on self-reflection, forethought, and performance phases, respectively. For example, she stated: *“I know that I don’t have to, but I want to read this book because I think it is useful.”* Additionally, the teacher scaffolded Learner H’s task choice by providing monitoring support, which resulted in the maintenance of effort (See metacognitive monitoring). The results are consistent with

earlier findings of Jin et al. (2020) that suggest contract learning can reduce anxiety and improve foreign language engagement and self-efficacy.

As previous studies have discussed (e.g., Carter et al., 2020), providing pacing support for learners (e.g., extending deadlines) is necessary for fostering their self-regulation, especially during the pandemic. As observed in the case of Learner H, the four-phase progression of the learner's interest (Hidi & Renninger, 2006) from a situational interest in an activity to individual interest can lead to autonomous self-regulation (Zimmerman, 2011) and persistence (Schunk & DiBenedetto, 2020).

During the course, the teacher provided task strategies for comprehension and translation of the articles in a stepwise fashion. Task strategies are part of the performance phase in Zimmerman and Moylan's (2009) model. However, the teacher needed to help the students develop these strategies before they started the assignments to scaffold their self-efficacy beliefs. Further, the learners chose the specific pages of the articles in the syllabus that they wanted to translate and documented this choice on shared Google Docs. The teacher adapted the course to the learners' pace of learning and their needs by encouraging them to download and read articles of their choice and share this knowledge with their classmates in the WhatsApp group. Learner A reported the positive influence of instruction on task strategies and said that *"you tried to guide me to the answer indirectly. For example, you told me to go and search the word in a specific way and report it back to you."* Similarly, the teacher's attempt to shift the control to the learners resulted in Learner D's positive self-regulatory attitude.

These results indicate how encouraging learners to exercise agency, giving them "the power to control one's learning through self-regulation" (Oxford, 2003, p. 78), can lead to a student-directed classroom, which conforms to the tenets of contract learning and self-regulation. Individualized feedback that is tailored to students' needs and acknowledges their strengths has the potential to increase their self-efficacy.

On the contrary, learner Y, who faced financial and emotional challenges during COVID-19, was dealing with decreased interest because he preferred a face-to-face delivery format. The teacher adopted self-efficacy talk (Wolters, 2003) and recorded in her log that *"I tried to boost his self-efficacy, so I told him that if he just comes to the class and completes short easy tasks...he will improve. I tried to give him hope and encouragement."* However, this strategy did not work. The data from the interview with the learner suggested that the possible reasons for the inefficacy of this strategy in boosting this learner's self-efficacy could be his low proficiency level and preference for a face-to-face learning mode. In general, it seems that the participants appreciated the self-efficacy talk when the instruction mode matched their preference (e.g., Learner H, who preferred the online delivery mode). However, they did not welcome it when the delivery format was not congruent with their perceptions and motivational beliefs (e.g., Learner Y and Learner N). As also discussed by Bielak and Mystkowska-Wiertelak (2020), contextualizing self-regulated strategies is critical when language teachers provide learner-directed strategies.

These findings are significant because goal setting and planning are effective strategies that can cognitively, affectively, and behaviorally influence learners' outcomes in online learning (Lai & Hwang, 2021). Despite the fact that prior studies have shown that teachers have rarely instructed metacognitive strategies and scaffolded the planning phase in learners (Dignath & Veenman, 2021), our results suggest that contract learning, with an integral feature of goal

setting and deadlines, provided the individualized scaffolding support while considering the human factors (Wong et al. 2019) and learners' needs.

## **Performance**

The second phase of the cyclical model is performance. The data analysis resulted in four subthemes: metacognitive monitoring, a self-observation strategy, and three self-control strategies consisting of help-seeking, time management and commitment, and environmental structuring.

**Metacognitive monitoring.** Contract learning includes deadlines, metacognitive prompts, feedback and advice, and ongoing monitoring support for the learners during and outside the class. The teacher provided more monitoring support at the beginning of the pandemic as she was worried about how learners were dealing with this sudden shift to online learning mode. The teacher monitored learners' progress individually at the beginning of each session and out of the class. The teachers' scaffolded monitoring was aimed at helping the learners to start self-monitoring. As Wong et al. (2019) have discussed, the existing association between the SRL phases requires complementary scaffolding support in every phase to ensure the maintenance of SRL behaviors in learners.

The results point to the positive influence of the teacher's monitoring support on learners (N = 5). For example, during the interview, Learner D recounted that "*you monitored our progress continuously even out of the class, and this made me do my assignments.*" Learner H showed an enhanced self-monitoring skill and an awareness of her learning process, saying that "*my interest in learning English has grown, and I have improved because of your continuous monitoring and support.*" In another case, Learner A and his family's health issues had become a serious challenge since they were ill and dealing with COVID-19 at the time. He was distressed and did not attend the sessions for a few weeks. Despite not receiving a response from the learner, the teacher complied with the terms of contract learning and "*greeted and left him a message at the beginning of each session to see if he would attend the session or not.*" The teacher's ongoing monitoring support reminded him of the contract terms. The learner called the teacher and explained his family's health situation. The ongoing learner-teacher interaction and exchange prompted effort initiation in the forethought phase. Learner A also employed the help-seeking strategy to enhance his performance (See help-seeking).

These findings underline the importance of monitoring support and scaffolding during the pandemic, as "learners under duress may also find it more difficult than usual to be self-directed" (Carter et al., 2020, p.322). These results are consistent with Ismail and Yusof's (2012) findings, which showed learners' positive perceptions of contract learning and its impact on promoting self-monitoring. These results also align with previous studies, which suggest that monitoring learning pushes learners to expend more time and effort (Zimmerman, 2011) and helps them overcome procrastination (Wolters et al., 2017).

In contrast, some learners frequently had defensive reactions during the course. For example, Learner N did not even respond to the teacher's messages asking him why he had not attended the class (See self-reaction). The teacher sent reminders and asked him about his progress. She also sent all the materials and explanations to him. As a result, Learner N promised to comply with the contract terms and overcame procrastination. Eventually, he returned to the class and completed the overdue assignments, but this change did not last. Contrary to the other learners'

proactive behaviors in response to the teacher's monitoring support, Learner N, Learner Y, and Learner Z did not display durable SRL behaviors.

Although the teacher's monitoring support can encourage the learner to refocus on the task and to return to the forethought phase (Veenman 2013, as cited in Dignath & Veenman, 2021), push the learners to expend more time and effort (Zimmerman, 2011), and help them overcome procrastination (Wolters et al., 2017), there are some exceptions to this rule. Notably, the provision of monitoring support for Learners N, Z, and Y did not prevent their eventual defensive responses, such as absenteeism or task avoidance. These learners' individual preferences, emotions, and experiences due to the external challenges at the time and the attribution of their performance to external or internal uncontrollable causes (See self-reflection) can be the reason for their low self-regulation.

**Help-seeking.** Learners' help-seeking behavior originates from their willingness to gain autonomy and can lead to SRL development (Hoyle & Dent, 2018). Although isolated or asynchronous online learning environments may negatively affect learners' help-seeking behaviors (Dunn et al., 2014), contract learning—by providing direct one-on-one tutoring sessions and negotiated responsibilities—seemed to have encouraged help-seeking in some of the learners (N = 3).

Learners sought help from the teacher on different occasions. For example, Learner R, speaking on behalf of his classmates, sought help from the teacher. He mentioned “*challenges like work, family, and university courses*” as factors that had made it “*impossible for us to catch up with everything...or finish our theses*”. Learners' reflection on the assigned goal and plan and their realization that they could not accomplish them in the performance phase led them to the reflection phase. Consequently, they decided to seek help from the teacher. After discussing this issue with the supervisor, the teacher decreased the load of the materials to accommodate learners' needs, as pacing flexibility during difficult times such as the pandemic (Johnson et al., 2020) is essential. Consequently, the teacher's adaptation initiated the next SRL feedback loop and led the learners to a new forethought phase.

In another instance, Learner R “*asked me to record and send the audio files of the passages because the publisher had not provided them and he needed to listen to them,*” the teacher noted in her log. Addressing this need reduced the cognitive load and resulted in learner satisfaction. It also helped other learners who needed the audio files but had not sought help. Also, Learner A, responding to the teacher's monitoring support while he was dealing with COVID-19, sought help from the teacher, saying: “*I will do whatever it takes to catch up with the study schedule and others. Please tell me what to do.*” The initiated SRL cycle was further scaffolded by the teacher's goal-setting and monitoring in the following sessions.

These results further support previous studies linking adaptive help-seeking strategy use with SRL development in learners (Karabenick & Newman, 2006; Karabenick, 1998), particularly in situations where the learner cannot resolve the problem independently (Newman, 2008). As Zimmerman et al. (2017) have discussed, though sometimes assumed as a sign of dependence, help-seeking can be an information-seeking path to independence and self-regulated learning.

In contrast, learners who already had a high level of self-regulation or proficiency level and those who dealt with emotional challenges caused by isolation during COVID-19 were less likely to seek help. Further, low self-regulated learners tended to request help without putting in the effort. For example, Learner N asked the teacher to dedicate extra time during the session



for doing the exercises or translation without expending the time and effort to do them before the class. This is an example of the non-adaptive form of help-seeking. According to Newman (2008), adaptive help-seeking involves requesting help when the person is unable to cope independently and when soliciting help is deemed necessary. In contrast, non-adaptive forms of help-seeking involve requesting help unnecessarily without putting in enough effort or avoiding help-seeking.

In sum, lower self-regulated learners (Learner N, Learner Y, Learner Z) resorted to non-adaptive forms of help-seeking without putting in the effort and avoided the teacher's help and support. They did not respond to the teacher's monitoring, prompts, or reminders or did not request assistance. On the other hand, higher self-regulated learners (e.g., learner D) managed their time and effort and were less likely to engage in help-seeking due to their confidence in their abilities, which resonates with the findings of Azevedo et al. (2004) and Kizilcec et al. (2017).

**Time management and commitment.** The current study leveraged an action plan with deadlines for achieving goals and learner-chosen times of one-on-one tutoring sessions to prompt learners to practice time-management skills. The results of this section include the subtheme of commitment combined with time management, as the codes shared similarities in the data and were difficult to distinguish.

Contract learning positively affected some learners' time-management skills (N=3). This improvement was evident in their on-time submission of assignments without the need for reminders. For example, Learner A compared his study habit before the pandemic and during the contract learning course. He said, *"I spent more time on studying during contract learning"* and emphasized the commitment that he felt during the course as *"in contract learning sessions, I had to dedicate some time to do the homework, and this increased my pace of learning."* Similarly, Learner D stated that *"the nature of the class made us commit. Although I didn't have much time, I sometimes stayed up at night or woke up early in the morning to do the assignments."*

Notably, the teacher faded the monitoring support for learners who showed improved time-management skills. In general, these learners maintained high time management skills even after fading the support. However, the teacher increased the monitoring support when the learners showed decreased commitment or time management issues due to the increased workload of the other courses or their family and work problems.

Conversely, some learners' time-management skills (N = 4) did not improve significantly. For example, Learner Z explained his interest in learning English and stated: *"During COVID-19, we were busy with virtual work-related social groups...and online meetings made time-management difficult."* He also cited the necessity of committing to the learning process and expending more time and effort during contract learning sessions as the reason for his task avoidance and other defensive decisions. Learner Y stated that the financial problems caused by the pandemic and the increased workload when he *"sometimes was working till midnight without eating lunch or dinner"* was a critical factor for his failure in time management. Similarly, Learner R recounting that *"I was always short on time. I came late to the sessions because I was busy with my work,"* explained his low commitment toward attendance during contract learning sessions. Although work and family responsibilities can significantly impact

the available study time and persistence of non-traditional learners (Dille and Mezack, 1991; Stavredes & Herder, 2018), teacher scaffolding can improve their SRL.

**Environmental structuring.** Environmental structuring includes selecting or arranging the setting to make the task completion successful or learning easy (Zimmerman, 2011, 2013), for example, by organizing the papers, locating the textbook, or arranging the videos and files on the computer (Oxford, 2017). In a nuanced instance of environmental structuring, Learner A recounted that *“I printed the textbook and the articles...after a while, I realized that this didn’t work for me. So, I used my laptop and opened two dictionaries; at the same time, I was communicating with you on WhatsApp.”* The teacher also scaffolded the learning process and used the affordances of Google Docs to create a shared space. Learner A explained that *“you highlighted one sentence for me on the shared Google Docs, and you asked me to edit that piece because it was wrong, and at the same time, I was following your feedback and the class.”*

Choosing a comfortable and appropriate learning environment without any distractions is another example of environmental structuring, which can differentiate high and low self-regulated learners (Barnard et al., 2009). The analysis of the teacher logs and interviews revealed that learners tried to avoid distractions during one-on-one tutoring sessions. For example, the teacher observed that Learner D *“stayed at work and used his quiet office;”* Learner R *“used a quiet room and told the others not to distract him.”* Learner A said, *“I took my wife and my kids to her sister’s house because of the exam.”* and *“I tried to find a quiet place inside the house, even though we have a newborn baby and our house is never quiet.”* However, he added, *“I sometimes helped them even during our sessions.”* This quote resonates with Stephen et al.’s (2020) assertion that learners’ knowledge of environmental structuring does not necessarily imply a readily accessible environment for non-traditional learners. Thereby, these learners’ work and family responsibilities and commitments can impact the environment and their study time.

### **Self-reflection**

Self-reflection is the third phase of the SRL model. This phase consists of two main categories: self-judgment and self-reaction. Self-judgment itself consists of self-evaluation and causal attributions. More specifically, self-evaluation is a comparative evaluation of one’s performance with a standard or goal depending on objective feedback and “the appropriateness of the standard” (Zimmerman, 2011, p.58). Therefore, integral to SRL processes (Butler & Winne, 1995), particularly in the self-reflection phase, feedback is an effective contributor to learning (Hattie & Timperley, 2007). While learners reflect on their progress, they tend to attribute their success or failure to some causes (e.g., internal/external causes). Self-reaction is a natural consequence of self-judgment, manifested in the learner’s self-satisfaction/affect and adaptive/defensive decisions.

**Self-judgment: Self-evaluation.** To prompt students to self-evaluate, the teacher gave feedback during contract learning sessions. As evaluation with pre-specified standards is an essential part of learning contracts, the teacher, when giving feedback, prompted self-reflection on goal achievement. At the beginning of each session, she asked questions such as *“What did you do during the week?”* to evaluate the learners’ progress toward the assigned goals. Effective feedback can help with scaffolding self-reflection in learners (Van den Boom et al., 2007). For feedback to be effective, the instructor needs to individualize the feedback and modify her teaching based on learners’ needs. Consequently, as part of contract learning, the instructor

gives feedback on learners' goal accomplishment, provides feedback for the assignments, and encourages them in the event of setbacks (McGarrell, 1996). However, feedback alone is not enough. It should be accompanied by setting new goals and feedforward (i.e., "constructive guidance on how to improve" Tsagari et al. 2018, p. 212). A combination of feedback and prompt leads to more significant results (Wong et al., 2019). Therefore, the teacher created a personal feedback loop (Zimmerman & Moylan, 2009) for each learner. She provided regular feedback on their progress and assignments and instructed the students to edit their assignments accordingly and send them back. For example, once the teacher found that "*the unit was still difficult for him [learner R] to understand; so, I told him that we will work on it again next session.*" The teacher prompted him to refocus on the task and return to the forethought phase. In another case, Learner H reflected on her progress, stating that "*I have many problems in grammar*" and requested help.

In contrast, Learner N displayed cognitive disengagement in his task completion. The teacher gave feedback on his incomplete assignment and goal achievement and asked him to complete it for the following session. However, prompting the learner to self-evaluate resulted in his resorting to reactions such as procrastination and absenteeism (See self-reaction for possible reasons why this was the case).

All in all, as mentioned previously, the teacher's scaffolding and contract learning self-reflection prompts helped with the learners' self-evaluation (as also discussed by Usher and Schunk, 2018), induced a feeling of commitment, and improved persistence in three learners. The findings resonate with similar findings that emphasize the role of contract learning in inducing a sense of commitment (e.g., Jin et al., 2020; Lan et al., 2020).

**Causal attributions.** After self-evaluation, learners tend to make causal attributions during self-judgment. Causal attributions function as a central source of motivation during the self-reflection phase (Zimmerman, 2000). Causal attributions depend on three factors, including locus (i.e., internal or external causes), stability (i.e., stable or unstable causes), and control (i.e., controllable or uncontrollable causes). Among these factors, locus of control has been reported as the predictor of success among college students in distance education (Dille & Mezack, 1991). Attributing success or failure to internal controllable causes such as behaviors and effort can result in perseverance and success (Dabbagh, 2007; Dille & Mezack, 1991; Mueller & Dweck, 1998).

Analysis of the data showed that four learners attributed success or failure during online contract learning to internal, controllable factors. For example, Learner D said that "*whenever I dedicated my time to studying, I improved.*" Also, Learner A stated that "*contract learning...made me realize that I myself have to do something for my learning.*"

Furthermore, the teacher utilized attributional feedback to positively affect learners' causal attributions and self-reactions. Providing constructive attributional feedback can guide learners to make adaptive decisions. Assessing learners' causal attributions and perceptions toward learning can help the teacher diagnose existing motivational or cognitive issues and prevent their negative consequences in the future. However, teachers rarely assess learners' causal attributions (Zimmerman, 2002). For example, in this study, the teacher asked Learner H whether she had used a dictionary while giving feedback on a translation assignment, prompting self-reflection in the learner. Then, the teacher explained that a wrong strategy (i.e., a controllable factor) was the reason for the mistakes in her translation. After providing

attributional feedback, the learner started to make adaptive decisions. Positive attributional feedback can affect learners' defensive reactions to errors and foster adaptive attitudes and SRL skills (Schrader & Grassinger, 2021). This will be explained in more detail in the following section.

Attributional feedback may sometimes contradict the learner's beliefs. Despite benefiting from the teacher's scaffoldings and pacing support during contract learning, relatively low self-regulator learners still tended to attribute their failures to external or internal uncontrollable factors. For example, Learner Y reported that "*I had a low proficiency level.*" Citing low proficiency as an uncontrollable internal cause led to defensive reactions. As previously discussed, Learner Y, Learner N, and Learner R reported their preference for face-to-face classes as the main reason for their opposing views and failure during the contract learning course. A possible explanation for Learner Z, Learner N, and Learner Y's procrastination, cognitive disengagement, and increased absenteeism was their causal attributions to internal or external uncontrollable factors (e.g., COVID-19, low English proficiency level, inability, delivery mode, work, and family priorities).

Overall, the results support Zimmerman (2002), who suggested that attributing outcomes to controllable causes helps maintain the level of motivation. In contrast, attributing failure to uncontrollable causes decreases motivation and will lead to defensive decisions. Attributional feedback can influence activity-related emotions, result in positive learning outcomes (Schrader & Grassinger, 2021), and considerably impact the self-efficacy and motivation of learners (Hennebry-Leung & Xiao, 2020). The teacher can change learners' self-reflections constructively and encourage them to have positive retrospective self-evaluations and self-satisfaction (Dörnyei & Muir, 2019). Nevertheless, causal attributions to uncontrollable factors had more debilitating effects in the case of a few learners, and the attributional feedback was minimally effective in reducing the negative emotions of these learners. This raises the question of how unhelpful causal attributions have played a significant role in how these learners have reacted. This question is discussed in the following section.

**Self-reaction.** The final stage of self-reflection is learners' self-reactions, such as self-satisfaction or dissatisfaction with performance and adaptive/defensive decisions regarding future efforts (Zimmerman, 2002). According to Zimmerman and Moylan's (2009) SRL model, when learners experience self-satisfaction and attribute outcomes to controllable causes, they make adaptive decisions (i.e., they are willing to expend effort and engage in subsequent SRL cycles). However, when learners are dissatisfied with their performance and attribute outcomes to uncontrollable causes, they make defensive decisions. These learners do not engage in subsequent SRL processes, resort to task avoidance and procrastination, and develop cognitive disengagement and apathy.

According to the data, Learner H and Learner D, who became increasingly self-regulated, made adaptive decisions as a result of their increased self-efficacy scaffolded by the teacher. For example, the teacher tried to attribute Learner H's performance on assignments to controllable causes, resulting in her making adaptive decisions. Moreover, the teacher's advice and instruction on appropriate task strategy resulted in the learner's goal accomplishment and self-satisfaction. In another case, following the teacher's interest enhancement scaffolding support, Learner Z, who was absent for a long time in the middle of the course, eventually returned to the classes and made adaptive decisions for a short period. He stated, "*I hope that I can use these sessions during this last month of the course.*" Despite his initial favorable attitude, the

adaptive response of Learner Z did not persist, and he resorted to absenteeism again in the following sessions. This can be attributed to the greater impact of environmental factors (e.g., isolation and lack of motivation) and the increased cognitive load of the material due to this continuous absenteeism. As Learner Z suggested, the possible reason was that *“when you don’t attend the sessions for a few weeks, keeping up with the syllabus becomes hard if you attend the sessions again.”* This result further emphasizes the significance of providing scaffolding support for at-risk non-traditional learners. According to Zimmerman (2000), self-satisfaction with the achieved subgoals leads to adaptive reactions and subsequent SRL development. Learner Z’s dissatisfaction with his underachievement seemed to prevent him from engaging in the subsequent SRL cycles.

Other learners, namely Learner A and Learner R, made defensive decisions for a few weeks (e.g., task avoidance and absenteeism) before becoming more self-regulated again. Possible explanations for this transitory procrastination were the experienced external emotional challenges at the time, their own and their family members’ health issues (i.e., COVID-19), and other family and work responsibilities.

Another possible explanation for the task avoidance and absenteeism in these learners was the felt responsibility toward the terms of the contract and the feeling of embarrassment when they failed to accomplish the set goals. For example, Learner A explained:

If you didn’t do the homework in contract learning classes, there would be no point in going to the class. When the teacher asks me which lesson we should check out today every session, I feel like I should prepare something.

As mentioned earlier, the data revealed that the teacher’s scaffolding support and learners’ felt commitment to the terms of contract learning prompted Learner A and Learner R to return to the sessions and engage in a new forethought phase. This finding is consistent with that of Raković et al. (2022), who showed that prompting low-performer learners to constructively evaluate their performance and guiding them to make appropriate plans can positively influence their proactive behaviors in the subsequent SRL phases. However, our data showed that the scaffolding did not work for other underachievers in the class. Particularly, Learner Z, Learner N, and Learner Y had defensive reactions, such as task avoidance, cognitive disengagement, and procrastination, for an extended period. For example, Learner N’s decreased motivation resulted in rushing through the homework rather than learning and understanding it (i.e., cognitive disengagement). As mentioned in the previous section, this was followed by the teacher’s performance and attributional feedback. However, the learner displayed ongoing procrastination. On one occasion, he explained that *“I had to focus on other courses. So, I could not complete this assignment.”*

In general, the observed defensive decisions in the learners can be attributed to different factors such as emotional challenges caused by isolation during COVID-19 in the case of Learner Z; and low self-regulation, preference for face-to-face learning mode, low self-efficacy, or other work, family, or personal priorities in the case of Learner N and Learner Y. Despite the promise of SRL scaffolding (e.g., Dignath & Veenman, 2021; Raković et al., 2022; Wong et al., 2019, to name but a few), proximal goal setting, deadlines, ongoing monitoring, and feedback did not lead to significant SRL development in these learners. This points to the greater pull of the competing external factors influencing the outcome of teacher intervention on these non-traditional learners’ performance.

## General Discussion and Conclusion

The current study was conducted to better understand how to mitigate the unforeseen problem of disrupted education brought on by the pandemic. Using a qualitative approach, we studied how employing contract learning can foster the SRL skills of non-traditional and at-risk learners during difficult times. The study also portrayed the teacher's scaffolding strategies during the three main phases of contract learning (i.e., planning, performance, and evaluation) and the learners' SRL development according to Zimmerman and Moylan's (2009) SRL model. The findings showed that the SRL-conducive environment employed by the teacher had a positive influence on the SRL development of most of the learners. The results showed how the dynamic cycles of SRL processes unfold and lead to learners putting forth greater effort during subsequent phases of SRL development as they struggle with external challenges (e.g., the pandemic) and are provided scaffolding in the form of contract learning. Further, the study has shown that learners fell into three categories regarding their attitudes toward contract learning: a) learners who were adaptive and able to acquire most components of Zimmerman's SRL cyclical model; b) learners who were partially adaptive and experienced challenges maintaining effort; c) learners who reacted defensively to contract learning and displayed a low capacity to employ the SRL skills.

The results underline the significance of the forethought phase and the ongoing monitoring of the learners' progress during the performance phase in observing motivational outcomes in the self-reflection phase. Contract learning goals and deadlines and the ongoing monitoring support facilitated the SRL development in Learner H and Learner D; thus, these learners adopted most SRL skills. Although Learner A and Learner R became defensive for a short time at the beginning of the course, they gradually improved and engaged in further SRL cycles. These four learners believed that the teacher's ongoing monitoring during contract learning significantly impacted their decision to stay the course and not drop out. Moreover, for the intrinsically motivated learners, the teacher's support further scaffolded their learning process, resulting in positive self-reflection and self-reaction, hence, facilitating the subsequent SRL cycles. However, Learners N and Y, and to some extent, Learner Z, did not initiate the forethought and performance phases due to their defensive responses. Therefore, they inevitably resorted to non-constructive causal attributions for their lack of progress, negative self-reflections, and defensive self-reactions.

The key factors that hindered these learners' progress included external and emotional challenges caused mainly by COVID-19, task interest or value, proficiency level, preference for the delivery format, work and family priorities, and the nature of their causal attributions. Perhaps most importantly, it seems that the fundamental perceptions of the learners toward learning (i.e., perceiving learning as a solely teacher-centered process as opposed to the learner-centered perceptions of self-regulated learners) can influence their effort maintenance. This factor differentiated Learner Z, Learner N, and Y. Learner Z thought of the learner as an active member in the learning process; therefore, he showed some improvement in the forethought and self-reflection phases. Nevertheless, external factors prevented him from engaging in the performance phase. However, Learners N and Y perceived the teacher as being responsible for the learning process and did not show any improvement in any of the three phases. This result is not unexpected because a fundamental premise of contract learning is that students should be willing to assume more responsibility for their learning. Thus, contract learning will not work

in the case of learners who have an incongruent mindset or have a favorable attitude but cannot commit to the terms of the contract.

Overall, the results indicate that the teacher's scaffolding in contract learning can commit the learners to the learning process and positively impact learners' SRL development, provided that the learners have a positive attitude toward it. The study contributes to our understanding of the underlying issues in initiating and maintaining efforts. The difference in the degrees of effectiveness of contract learning in developing SRL in different students highlights that there is a complex network of factors that affect learners' reactive or proactive performance within Zimmerman's (1989) triadic feedback loop. Further, some external factors can have a more substantial effect than the scaffolding intervention provided by contract learning. The present study further supports the link between human factors such as non-traditional learners' family and work responsibilities and SRL. Students who struggle to adapt to this shift during the pandemic need more scaffolding to develop SRL in online learning environments. Given the complexity of learner differences, the need for tailored scaffolding support and individualized learning is crucial.

### **Limitations and implications**

The current study has some limitations. First, although the results indicate the SRL development in learners and affective scaffoldings during the process, considering the small sample size of the present study, caution must be exercised in generalizing the results. Second, the present study focused on adult learners who were mainly non-traditional learners who had full-time jobs, families, and responsibilities and did not belong to a competitive academic culture. Therefore, the results need to be interpreted with caution when considering learners beyond this specific population.

Notwithstanding these limitations, the findings have important implications for developing SRL skills by using contract learning. The present study was conducted on non-traditional learners with work and family responsibilities in an online course during the COVID-19 pandemic through WhatsApp. The weak Internet infrastructure and the lack of access to educational resources and platforms were the main challenges. Nevertheless, the current action research adopted the contract learning approach to scaffold the learners' SRL processes and to mitigate learner dropout during the pandemic. Therefore, the findings of this study show how teachers can use contract learning as an individualized approach to learning to scaffold self-regulation in learners with poor SRL skills or nontraditional learners at risk of dropout even in contexts where access to digital tools and facilities is limited.

Contract learning encourages learners to have more agency and makes them more accountable while considering human factors when adopting different SRL scaffoldings in classrooms. Inevitably, uncontrollable factors might affect learners' motivation at different times. Therefore, during the forethought stage, teachers can negotiate with the learners to modify the goals, deadlines, and evaluation criteria and adapt the scaffolding strategies to their classroom's dynamic environment and learners' changing needs. Teachers need to consider language learners' proficiency levels, motivation, and interest during the forethought stage. At the same time, the inherent ongoing monitoring and feedback in contract learning allow instructors to adopt timely scaffolding strategies to develop SRL skills when they encounter proactive or reactive behavioral responses in learners.

In this regard, the findings on the changing regulatory behaviors of language learners suggest that special attention must be paid to the low-performing language learners and their defensive self-reactions, such as absenteeism, inconsistent performance in the assignments, or passive behaviors indicating decreased motivation and interest. Adopting strategies such as interest enhancement, self-efficacy talk, and renegotiation of contract learning goals and deadlines can be possible solutions during these critical incidents. The findings of the current study on language learners' positive change of self-regulatory behaviors, while preliminary, underscore the relationship between teachers' monitoring behaviors and language learners' motivation, emotion, and self-regulatory behaviors. Our findings demonstrate how learners' proactive and reactive behavioral responses may signal the underlying motivational, emotional, or external factors, hence the need for support. In our study, language learners who resorted to defensive reactions such as absenteeism were those who needed proximal goals and plans in the forethought stage, adaptation of the individualized learning that they received and monitoring scaffolded support during the performance stage, and evaluation and renegotiation of the terms of their contract learning in the self-reflection phase.

## Notes

1. In the present study, (individualized) scaffolding refers to support that is adapted to the learners' needs according to the contract learning approach to assist them in becoming more self-regulated learners. Further, the terms such as "tailored scaffolding," "individualized scaffolding," and "adaptive scaffolding" all refer to scaffolding support that is adapted and individualized based on learners' needs.
2. <https://www.pearsonerpi.com/en/elt/block-b/market-leader>

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