

The Effectiveness of Teacher Autonomy Supportive Style on Enhancing Student Engagement in EFL Virtual Classrooms

Faten Ahmed Salami¹ & Dr. Abeer Sultan Althaqafi¹

¹ English Language Institute (ELI), King Abdulaziz University (KAU), Jeddah, Kingdom of Saudi Arabia

Correspondence: Abeer Sultan Althaqafi, Associate Professor and the Supervisor of the Quality and Academic Accreditation at the English Language Institute at King Abdulaziz University, Jeddah, Saudi Arabia.

Received: December 20, 2022

Accepted: February 10, 2023

Online Published: February 13, 2023

doi:10.5539/ells.v13n1p44

URL: <https://doi.org/10.5539/ells.v13n1p44>

Abstract

Promoting students' engagement in classrooms is among the most significant challenges faced by teachers in virtual classrooms. Prior research has investigated the effectiveness of using teacher autonomy supportive style (TASS) during in-person classes (Jang et al., 2010; Li et al., 2020; Núñez & León, 2019; Reeve et al., 2004). However, limited research has been conducted in virtual classrooms (Bedenlier et al., 2020; Chen & Jang, 2010; Chiu & Hew, 2018). Ryan and Deci (2020), suggested that further research should focus on student engagement within virtual classrooms. Moreover, although EFL teachers often struggle to engage their students (Susanti, 2020), the majority of the related studies have been carried out in various learning contexts (Jang et al., 2010; Li et al., 2020; Shih, 2008). Most of this limited body of literature in the EFL context is composed primarily of quantitative research collected through cross-sectional study designs. Evidence suggests that this gap can be addressed by conducting well-designed qualitative studies investigating student engagement (Fredricks et al., 2016; Harris, 2011; Zyngier, 2008). Thus, there is an urgent need for research that tackles these gaps effectively.

Keywords: Teacher autonomy supportive style, student engagement, behavioral engagement, cognitive engagement, emotional engagement, virtual classrooms

1. Introduction

Over the past two decades, there has been an increase in the number of online courses and programs (Keengwe & Kidd, 2010). In particular, the COVID-19 crisis at the beginning of 2020 has significantly quickened the adoption of virtual learning worldwide. Virtual learning is an umbrella term that includes several distinct and overlapping terms, such as e-learning, blended learning, online learning, and online courses (Singh & Thurman, 2019). Thus, the terms “virtual” and “online” are often used interchangeably to refer to the process of teaching and learning with the help of technology. The use of this type of learning environment has transformed traditional methods of teaching and learning. Accordingly, engaging students in virtual environments becomes a challenging task for many teachers (Henrie et al., 2015). In addition, online learners appear to have fewer opportunities to engage in the learning process, which is a crucial issue (Martin & Bolliger, 2018). Hence, extensive research has been conducted to ensure the delivery of high-quality education and offer students the opportunity to engage with online courses (Bergdahl et al., 2020; Ryan & Deci, 2020).

However, the existing literature lacks a consensus on the definition and forms of student engagement. Some researchers have argued that student engagement originates through actions that produce meaningful learning and involve students in the learning process (Lawson & Lawson, 2013). These actions could be divided into external (observable) and internal (unobservable) actions. According to Fredricks et al. (2004), the multidimensional construct of student engagement comprises three distinct yet interrelated components, namely, behavioral (e.g., participation), cognitive (i.e., learners' mental activity in the learning process), and emotional engagement (i.e., the presence of positive emotions and the absence of negative emotions). These components are highly context-dependent constructs. Therefore, a variety of contextual elements, such as teachers, peers, and parents, could play a critical role in student engagement (Ryan & Deci, 2020). Similarly, within the language context, Dörnyei (2019) highlighted that the L2 learning experience is dependent on the interactions between the learners and the learning environment, including the school, syllabus, peers, and teachers. Consequently, it could be argued that teachers play a vital role in promoting student engagement through the various components of the educational environment (Sulis & Philp, 2021). Thus, English as a foreign language (EFL) teachers must build a

safe and supportive environment (Noels, 2013) to avoid the lack of engagement and isolation among students (Brackett et al., 2011).

According to the self-determination theory (SDT), students can be engaged based on the fulfilment of their basic psychological needs (BPN). Therefore, linking the roles of teachers and student engagement within SDT, Deci et al. (1981) developed a teaching style known as the teacher autonomy supportive style (TASS). Using this style, teachers can deliver the content with an interpersonal tone of understanding that appreciates, supports, and satisfies students' needs (Reeve, 2015). Therefore, TASS focuses on modifying the educational environment to increase student engagement (Saeki & Quirk, 2015). Thus, this study explores how teachers can support and assist their students to enhance their engagement using this teaching style.

1.1 Purpose and Significance of the Study

The study aims to investigate the impact of TASS on EFL student engagement in virtual classrooms through BPN in the Saudi context. Therefore, it contributes to the extant literature and is important for both EFL teachers and students. The results of this study can also serve as a basis for designing effective and active virtual classrooms. Moreover, the findings inform educators of students' needs, prerequisites, and perceptions that may influence their engagement.

1.2 Research Questions

The major research questions that guide the study are as follows:

- 1) What is the impact of the teacher autonomy supportive style on EFL student engagement in virtual classrooms?
- 2) How basic psychological needs play a mediating role between teacher autonomy supportive style and student engagement?
- 3) Is there a difference between male and female EFL students in terms of perceived teacher autonomy supportive style, basic psychological needs, and student engagement?
- 4) What are EFL learners' perceptions of the teacher autonomy supportive style in terms of behavioral, cognitive, and emotional engagement in virtual classrooms?

1.3 Theoretical Framework

According to the existing literature, several motivational and psychological theories have been applied to investigate the role of context and its effectiveness in shaping certain behaviors, such as social cognitive theory and self-determination theory. These theories have been widely used across many educational areas to investigate the impacts of teacher behaviors on student engagement.

Social cognitive theory (SCT) is a learning theory developed by Bandura (1986). It describes how an individual's behaviors can be shaped by their environment. A key concept associated with SCT is *reciprocal determinism*. According to Bandura (1978), this is a framework consisting of three essential factors that influence each other, namely, personal factors (i.e., individual's expectations, beliefs, feelings, thoughts, and personality characteristics), social environment (i.e., teaching practices), and behaviors (i.e., students' behaviors). These three variables are arranged into a causality framework, which indicates that they interact dynamically and reciprocally to shape human behavior (Bandura, 1978). Based on this perspective, it could be assumed that teaching practices play a major role in shaping the educational environment and that students' beliefs and thoughts could impact their actions within or outside classrooms.

Another popular theoretical view proposed by Deci and Ryan (1985) is known as the *self-determination theory* (SDT). It emphasizes that social contextual factors can facilitate or undermine individuals' attempts at personal development. SDT includes a sub-theory known as the *basic psychological needs theory* (BPNT). According to BPNT, students have three BPN, namely, autonomy, competence, and relatedness. Therefore, they are more likely to be engaged in classroom activities when their psychological needs are addressed through interactions with others in the educational environment (Skinner & Pitzer, 2012). Since teachers are major elements in any learning environment, they play a significant role in facilitating the satisfaction of learners' BPN in the classroom (Reeve, 2012).

According to Reeve (2013), the starting point for understanding student engagement from the SDT perspective is to appreciate the inner motivational resources that allow them to engage themselves fully and constructively in the learning environment, which, in turn, features conditions that either support or thwart these resources. Thus, if the learners' needs for autonomy, competence, and relatedness are met through the teachers' actions and classroom dynamics, they remain actively engaged (Reeve, 2013; Ryan & Deci, 2020). Therefore, teachers who

use TASS to satisfy the three BPNs are more likely to engage their students behaviorally, cognitively, and emotionally. Thus SDT, which is the most related theory, guides this study to investigate how TASS influences student engagement (behavioral, cognitive, and emotional) as mediated by BPN (autonomy, competence, and relatedness) in virtual EFL classrooms (see Figure 1).

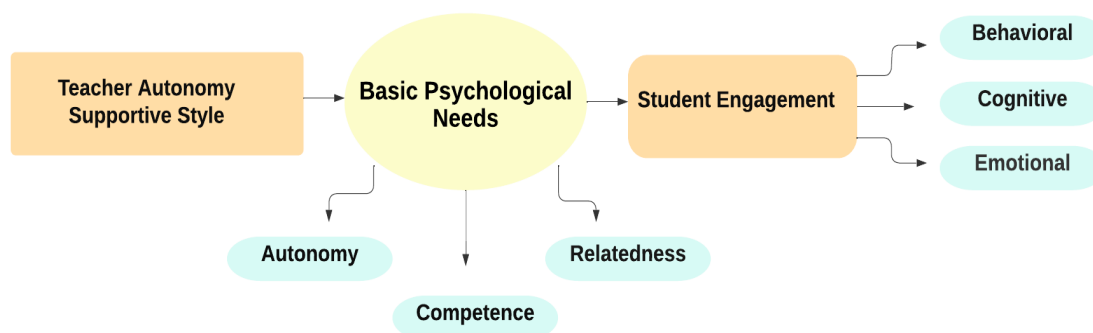


Figure 1. Student engagement within the SDT framework (Adapted from Reeve, 2013)

1.4 Student Engagement

Engagement Definition

Although student engagement is essential in the learning process and for student outcomes, research on the subject is hampered due to a lack of agreement on its definition due to the varied research contexts (Reschly & Christenson, 2012). In educational psychology, studies on engagement have largely been conducted in four major contexts, namely, communities, schools, classrooms, and learning activities (Skinner & Pitzer, 2012). In the community, engagement refers to the students' level of involvement and active membership in their schools and other organizations. At the school level, rates of attendance, dropout, or retention are frequently used as indicators of engagement (Finn, 1989). In EFL classrooms, relevant indicators of engagement are linked with interaction or participation in class and with outcomes related to language use and development (Philp & Duchesne, 2016). Dörnyei and Kormos (2000) used engagement as a variable to characterize L2 learners who showed a high level of involvement in language acquisition. Bygate and Samuda (2009) referred to engagement in a learning activity as the extent to which learners can achieve the objectives by understanding the learning tasks and gathering and utilizing resources to complete them. Moreover, Reeve (2012) considered engagement as the involvement of students in learning activities. Engagement has also been defined as a "broad construct intended to encompass salient academic as well as certain non-academic aspects of the student experience including, active learning, participation in challenging academic activities, formative communication with academic staff, involvement in enriching educational experiences, and feeling legitimated and supported by university learning communities" (Coates, 2007, p. 122). Newmann et al. (1992) defined student engagement as a "psychological investment in an effort directed toward learning, understanding, or mastering the knowledge, skills, or crafts that academic work is intended to promote" (p. 12).

Despite the variations among these definitions, researchers agree on one feature: engagement denotes action (Lawson & Lawson, 2013). For meaningful learning or instructional success, the energy required to perform an action can produce proactive student involvement in the learning process (Oga-Baldwin, 2019; Philp & Duchesne, 2016). This study considers the most comprehensive definition of student engagement, given by Christenson et al. (2012), who summarize student engagement as the effort put in by students to go beyond attending classes or performing academically. "They also put forth effort, persist, self-regulate their behavior toward goals, challenge themselves to exceed, and enjoy challenges and learning."

Student Engagement as a Multidimensional Construct

Another characteristic of student engagement is that it is a multi-construct (Appleton et al., 2008; Fredricks et al., 2004; Jimerson et al., 2003). As discussed previously, despite the lack of consensus in the literature on a universal definition, there is general agreement that engagement at least is comprised of three main dimensions, namely, behavioral, cognitive, and emotional engagement (Reschly & Christenson, 2012). Accordingly, this

study considers a comprehensive and common model developed by Fredricks et al. (2004), which highlights these three distinct yet interrelated components. They are described in the next section in further detail.

Behavioral Engagement

Prior research has defined behavioral engagement as the learners' behavioral choices, including participation, attention, and effort (Connell, 1990; Finn, 1989; Finn & Rock, 1997; Fredricks et al., 2004). In the language classroom, strong indicators of behavioral engagement include active participation, making an effort, involvement in speaking, time spent on task, and the amount of semantic language produced (Lambert et al., 2017). Evidence suggests that in the online environment, behavioral engagement can be determined through the characteristics of online discussions, including log-in and log-out times, system queries, and overall platform usage (Luan et al., 2020; Yang, 2011).

Cognitive Engagement

Helme and Clark (2001) found that cognitive engagement relates to mental processes, such as attention allocation and maintenance, as well as intellectual effort. The term "effort" may be considered problematic because it encompasses both cognitive and behavioral engagement. However, there must be a distinction between behavioral effort, which refers to the mere completion of a task, and cognitive effort, which focuses on conceptual learning and understanding (Fredricks et al., 2004). According to Helme and Clark (2001), cognitively engaged students are characterized by questioning, completing peer utterances, delivering evaluative comments, providing guidance, explanations, or facts, and defending arguments. Moreover, cognitive engagement involves greater mental effort, thus generating more connections between ideas and acquiring a more in-depth understanding (Weinstein & Mayer, 1986).

Emotional Engagement

"Emotional" and "affective" are terms used interchangeably in the literature to refer to emotional engagement. Jung and Lee (2018) described emotional engagement as the students' positive or negative feelings about their teachers, peers, and/or online courses. Svalberg (2009) characterized emotionally engaged students in the language classroom as having a positive outlook toward language and learning tasks. Additionally, emotionally engaged EFL learners tend to appreciate EFL classes, context, and the general atmosphere in the classes and have internal values that motivate them to learn the English language (Dincer, 2014). According to Pekrun and Linnenbrink-Garcia (2012), emotions, whether positive (e.g., enthusiasm, interest, enjoyment) or negative (e.g., frustration, anxiety, hopelessness, boredom), play a crucial role in students' learning. Thus, the vital role of emotional engagement is evident in the literature.

Student Engagement in Virtual Classrooms

Due to the development of educational technology in the wake of the COVID-19 pandemic, virtual learning has become increasingly popular in delivering content and designing materials and activities. Ally (2004) defines virtual learning as "the use of the Internet to access learning materials; to interact with the content, instructor, and other learners" (p. 7). Engagement differs in traditional and virtual environments because technology makes sustaining student engagement more challenging (Henrie et al., 2015). Susanti (2020) observed that although the students were engaged in EFL virtual classrooms, they struggled to articulate their ideas and engage in a cognitive manner. Moreover, they were apprehensive about making mistakes and following the virtual course, thus indicating a lack of emotional engagement. Students also had difficulty focusing on the lesson, which suggests low levels of behavioral engagement. Therefore, Ryan and Deci (2020) suggested that future SDT research should focus on student engagement within virtual classrooms. Thus, the following sections further discuss how teachers could support and engage their students.

Autonomous Supportive Environment

From the SDT perspective, teachers should build a supportive relationship with their students and enhance their level of engagement by satisfying their BPN. Therefore, the behaviors of teachers have been categorized into *autonomous* and *controlling* styles (Deci et al., 1981). The autonomous style refers to the behaviors of "a person in an authority role [e.g., teacher] considering the other's [e.g., student] perspective, acknowledging the other's feelings and perceptions, providing the other with information and choice, and minimizing the use of pressure and control" (Williams & Deci, 1996, p. 767). This is known as the teachers' autonomy supportive style (TASS) because teachers who employ it allow their students' sense of worth to guide classroom activities. This style involves neither extreme laxity nor the elimination of structure (Reeve & Halusic, 2009). Teachers who adopt this teaching style employ different instructional practices, which are as follows (Jang et al., 2012; Patall et al., 2013; Reeve et al., 2004):

- Caring about students' inner motivational resources, such as their interests and preferences, and values
- Using non-controlling language
- Demonstrating patience in starting self-paced learning
- Acknowledging and accepting students' perspectives

In addition, teachers who demonstrate TASS support their students' BPN, ask for their students' opinions and requirements (e.g., requesting their feedback on the lesson plan) and provide them with various choices. Subsequently, the instructors incorporate these factors into their lesson plans (Reeve, 2006; Reeve et al., 2004). Patall et al. (2010) suggest that providing choices is an important practice that creates an autonomous and supportive environment. In contrast, teachers who adopt the controlling style tend to disregard their students' intrinsic motivational resources or BPN and adhere to a teacher-centered agenda. Such teachers offer external rewards and impose external goals to encourage students to adhere to their assigned coursework. They develop a set of rules for their students and compel them to adhere to those rules by using persuasive language (Reeve & Jang, 2006).

According to Dincer (2014), teachers who adopt TASS in an EFL classroom tend to consider students' preferences and choices, create an open atmosphere, have confidence in students' knowledge and abilities, show creativity in teaching, conduct various activities, respond to students' thoughts and perspectives, provide explanatory rationales about any activity, and use a sense of humor. The use of humor in classrooms was supported by Shernoff (2013), found that the student engagement was highly engaged when teachers used a sense of humor in the classrooms. In contrast, controlling teachers are often aggressive while teaching, adopt standard course curricula, have fewer teaching techniques, engage in limited communication with students, exhibit their authority in the classroom, provoke anxiety, require strict adherence to curriculum, and fail to encourage questions (Dincer, 2014).

Prior research links TASS practices to student engagement and demonstrates that the lack of engagement in virtual classrooms is largely observed in less autonomy-supportive environments (Bedenlier et al., 2020; Chiu, 2021). Therefore, it is evident that autonomy-supportive environments would enhance student engagement (Ryan & Deci, 2017). The role of TASS in student engagement is further discussed in the following section.

TASS and Student Engagement: Students' Perspectives

For over two decades, researchers have adopted the SDT perspective to determine the role of TASS in student engagement. Reeve et al. (2004) conducted an experimental study to investigate whether TASS could enhance student engagement. They observed that student engagement is positively impacted when teachers provide their students with various choices, consider their preferences and needs, listen to and respect their opinions and compliments, and appear warm, and caring. Flowerday and Schraw (2000) demonstrated that the use of TASS practices, including the provision of choice, could improve student engagement by increasing their ownership, interest, creativity, and personal autonomy. In a more comprehensive study, Jang et al. (2010) compared different aspects of instructional styles, including TASS as a predictor of student engagement. Classroom observations and surveys revealed that TASS was a strong predictor of student engagement, resulting in them being more engaged behaviorally, cognitively, and emotionally. Shih (2008) argued that students who perceived TASS from their teachers were likely to demonstrate high levels of behavioral engagement (e.g., paying attention in class, persisting with difficult problem-solving, participating in class discussions, taking up difficult activities as a challenge) coupled with high levels of emotional engagement (e.g., showing interest and enjoyment in tasks). Recently, Li et al. (2020) demonstrated a significant and positive correlation between TASS and student engagement. The responses to their survey revealed that using TASS encouraged students to participate in learning activities (behavioral engagement), who became more concerned about the activities' intrinsic interest (emotional engagement) and were more willing to invest time and effort in the learning tasks (cognitive engagement).

In EFL context, Dincer et al. (2012) surveyed EFL students who considered their teachers as autonomy supportive in their speaking class. These teachers provided their students with the opportunity to choose their preferred activities, took their feelings into consideration, and encouraged them. Therefore, the students felt competent and confident about their speaking skills, as well as their abilities to achieve their educational goals by enhancing their engagement. However, the authors treated the aspect of engagement as a single latent construct, focusing only on EFL speaking classes. Thus, Dincer (2014) later examined how TASS may predict EFL student engagement with BPN as a mediating variable. The results from surveys and interviews revealed that TASS predicted each dimension of student engagement directly and indirectly via BPN. Additionally, EFL students were more emotionally, behaviorally, and cognitively engaged in the language learning process when

their teacher paid more attention to their preferences, encouraged their participation, provided clear guidelines about classroom practices, took their interests into account, and used a variety of teaching methods and activities.

According to Liu (2021), when EFL students receive more support for their BPN and experienced a greater level of TASS, their English learning is more effective and they demonstrate higher behavioral, cognitive, and emotional engagement. Therefore, a supportive environment is an essential component of L2 learning and helps students succeed. Sulis and Philp (2021) conducted a mixed method study to explore the role of the EFL environment in engaging French language students at different levels of proficiency. Their findings highlighted the important teaching practices that positively impact student engagement, such as creating a non-judgment and friendly environment, considering the students' abilities and interests, creating a pleasure-free classroom, and building positive relationships with students and among peers. Such an environment could shape the behavioral, cognitive, and emotional engagement of students.

In online context, the findings of Chiu's (2022) quantitative study revealed that TASS should be implemented in online classrooms through various digital resources, such as links, videos, and slides, clear instructions and requirements for digital submission, well-designed learning material, interactive lessons, and a positive classroom atmosphere. These practices can better satisfy the students' BPN and engage them behaviorally, cognitively, and emotionally. Moreover, Lee et al. (2015) argued that student engagement in online classes can be increased through the use of TASS. They highlight that TASS can be used in online learning by offering a variety of assignments and activities that best demonstrate the student's mastery of the learning objectives. Additionally, teachers in virtual contexts can enhance student engagement on multiple levels by providing opportunities for personalization and respecting and accepting their interests.

The autonomous supportive style is centered on allowing learners to guide their learning process (Ma, 2021). Thus, teachers who use TASS should create an active, pleasurable, cooperative, and interactive learning environment. Their cooperation, help, encouragement, support, respect, and consideration of BPN allow the students to guide their learning process. However, although various studies utilize strategies that could be involved as TASS practices, with students playing the main part in the learning process and engaging in the virtual classroom, these practices do not necessarily fall under the SDT framework (e.g., Ahshan, 2021; Almusharraf & Bailey, 2021; Martin & Bolliger, 2018; Oraif & Elyas, 2021; Wahid et al., 2020). For example, Oraif and Elyas (2021) examined the level of student engagement in online EFL classes that had an active and supportive learning environment. The results revealed that some practices, such as working in small groups, asking questions to enhance understanding, enjoying the class, receiving opportunities to learn and participate, and making effective use of strategies and technology, can efficiently engage learners behaviorally, cognitively, and emotionally. These findings suggest that teachers in online EFL programs should be cooperative and less authoritative. The cooperative instructor is part of a setting that emphasizes the utilization of auditory and visual stimuli. Similarly, Martin and Bolliger (2018) highlight that instructors need to ensure that their teaching style involves students in active participation, maintains their interest in the topic of discussion, and starts discussions using questions to spark the students' curiosity. Further, dividing students into small groups often produces active interactions and engagement between students and instructors.

According to Ahshan (2021), teachers in online classrooms should create an active learning environment by employing a variety of technological tools, clarifying the purpose of the class, encouraging students to participate in the classroom and in smaller group discussions in break-out rooms, and assessing their comprehension. Teachers should also employ visual content, interactive presentation tools, and web-based applications to analyze and evaluate their students' understanding. Evidence suggests that these practices have a positive impact on student engagement. Wahid et al. (2020) added that continuous evaluation and assessment of students' work are crucial to ensuring that they feel engaged. Moreover, Almusharraf and Bailey (2021) recommended the use of games in EFL online classes to enhance student engagement and learning outcomes, particularly in the L2 context; this approach positively impacts cognitive and emotional engagement and reduces anxiety while learning foreign languages. In general, the competition in such an environment attracts the students' attention and concentration and creates some excitement. Overall, the use of TASS through the integration of different interactive tools, applications, and content tends to enhance student engagement in virtual classrooms, particularly in EFL classrooms, as it helps in generating opportunities for cultural and linguistic immersion. However, teachers must use these tools in the appropriate way, when required.

Gender Differences

In accordance with SDT, it could be argued that male and female students benefit from TASS in terms of their engagement (Ryan & Deci, 2000). However, the role of gender has been underemphasized, especially in the

context of virtual learning. The findings related to gender differences in the context of student engagement are largely inconsistent (Tison et al., 2011). Some researchers report no differences between male and female students in the level of engagement in online learning (Baloran et al., 2021; Parker et al., 2021). In contrast, others claim that female students tend to exhibit higher levels of engagement (Korlat et al., 2021; Lietaert et al., 2015).

There is a lack of the number of studies that explore the role of gender in online learning in the context of both TASS and BPN. However, inconsistent findings regarding students' perceptions of TASS among males and females have been reported in traditional classrooms. While some researchers argue that there is no significant difference in such perceptions between male and female students (e.g., Jang et al., 2012; Parker et al., 2021; Zhou et al., 2019), others have found that girls scored higher than boys in terms of perceiving their teachers as TASS (Vansteenkiste et al., 2012). Similarly, the findings of studies investigating the level of BPN satisfaction in traditional classrooms have revealed strong gender invariance (Tian et al., 2014; Zhou et al., 2019). In contrast, Navarro-Patón et al. (2018) demonstrated that the levels of satisfaction of BPN were higher in male students than female students. Thus, further research is required, particularly in the context of virtual learning.

It is evident that the majority of existing research has focused on direct links between these constructs and their impacts (Jang et al., 2010; Li et al., 2020; Núñez et al., 2019; Reeve et al., 2004). A very limited number of studies have explored the various practices of TASS and their role in EFL student engagement (Dincer, 2012; Dincer et al., 2014; Liu, 2021; Sulis & Philp, 2021). Furthermore, although enhancing student engagement is the primary aim of this teaching style, there is little research on students' perceptions of TASS practices on their engagement in virtual EFL classrooms. Therefore, it is as yet unknown how SDT can be suitably adapted to build a successful and sustainable virtual learning environment while considering its complex, multidimensional, and situational nature (Bedenlier et al., 2020; Chen & Jang, 2010; Chiu & Hew, 2018).

In summary, this section focused on the critical role of SDT in explaining how TASS and the fulfillment of BPN can shape student engagement dynamically and reciprocally. Furthermore, this section critically summarized and evaluated the literature associated with these constructs. It was observed that TASS is a strong predictor of different dimensions of student engagement with BPN as a direct and indirect mediator. Finally, it identified the existing research gaps regarding the role of TASS in the multidimensional engagement of EFL learners in the virtual classroom. Thus, this study contributes to the literature by focusing specifically on TASS and its impact on student engagement in EFL virtual classrooms from students' perspectives.

2. Research Methodology

2.1 Research Design

SDT asserts that educational context plays a crucial role in enhancing student engagement. Within this framework, this study aims to investigate the impact of TASS on EFL student engagement through the fulfillment of their BPN in virtual classrooms. To achieve this aim, the qualitative approach was employed. The rationale behind choosing this design is that it provides a complete understanding of the research problem (Creswell, 2003; Dörnyei, 2007). Hence, a semi-structured interviews were conducted to gain a more comprehensive understanding of the participants' perspectives (Cohen et al., 2017).

2.2 Research Context

This study was conducted in an English Language Institute (ELI) at a public university in Jeddah, Saudi Arabia. ELI offers the *Preparatory Year English Language Program* (PYELP), which includes intensive English courses that equip students with the English language skills required for college or university-level study. PYELP consists of different tracks, including science, arts and humanities, health track, general English, academic English, English majors, geoscience, and communication and media. Each track consists of different proficiency levels based on the students' needs. These levels are aligned with the proficiency level descriptors of the Common European Framework of Reference (CEFR). The CEFR rates language ability on a six-point scale, starting with the beginner level (A1) and progressing to the advanced level (C2; Council of Europe, 2001). The Cambridge English Placement Test (CEPT) is used to identify the students' proficiency level efficiently and reliably. It was developed by Cambridge English, which is part of the University of Cambridge. If a student does not take the CEPT, they are automatically enrolled in level 101. In contrast, students may be exempt from the English Language Program if they achieve a certain score on the International English Language Testing System (IELTS) or Test of English as a Foreign Language (TOEFL) tests.

In the wake of the Covid-19 pandemic in 2020, PYELP began using virtual classrooms instead of traditional ones via the Blackboard learning management system. Narwani and Arif (2008) describe this system as "a broad term

that is used for a wide range of systems that organize and provide access to online learning services for students, instructors, and administrators” (p. 59). It provides several services for both teachers and students, including discussion forums, course content sharing, online assignments, interactions through emails, announcements, a grades center, virtual classrooms, a whiteboard, a welcome message, file and screen sharing, a chat function, break-out rooms, and a microphone. The Blackboard program was rarely used for teaching and learning in in-person classrooms, apart from submitting online assignments and sharing materials. However, it has become the main tool for EFL classes in the last few years.

2.3 Research Participants

This study was conducted during the academic year 2021–2022. Participants were EFL students who were studying online full-time during the study period at the ELI. This sample consisted of 5 students both males and females and did not have a gender bias. Table 1 presents the demographic information of participants included in the qualitative phase.

Table 1. EFL student’s demographics of the qualitative sample

Demographic Information			
Participants	Gender	Age	Proficiency level
P1	Male	18	Upper-intermediate
P2	Female	23	Intermediate
P3	Female	20	Intermediate
P4	Female	19	Beginner
P5	Male	20	Intermediate

2.4 Research Tool

Semi-Structured Interviews

Semi-structured interviews were used to obtain an in-depth understanding of the research phenomena. This tool was selected because it provides greater flexibility in ordering questions and allows additional questions to be asked, if necessary (Drever, 1995). To detect and address any existing issues before conducting the actual interviews, the questions were piloted on two students who were representative of the target population (Dikko, 2016). Following this process, minor clarifications and stylistic changes were made to certain questions. After determining the credibility and consistency of the qualitative interview instrument, 13 questions were incorporated into the final version. The interview protocol was comprised of three sections. First, the introductory sections provided background information about the interviewer, the purpose of the study, its objectives, and definitions of new terms. Second, the participants were asked about their perceptions of TASS practices on their engagement in EFL virtual classes in the main section. Finally, the concluding section gave the participant the opportunity to comment or provide any further information.

To collect qualitative data, online interviews were conducted using the Zoom platform in September 2022. First, the consent form was sent online to the participants to ensure their agreement. Prior to each interview, the participants were reminded about their rights to withdraw at any time. Then, each interview was audio-recorded and lasted between 40 and 60 minutes. Mackay and Gass (2005) recommend conducting interviews in the interviewees’ native languages to minimize issues relating to proficiency levels, which may negatively impact interview quality and quantity; thus, the interviews were conducted in Arabic. Finally, the sample to be used for the qualitative phase was identified by using saturation, defined as “data adequacy”, which is key to excellent qualitative results (Morse, 1995). Therefore, the decision was made to stop interviewing participants based on theoretical saturation as no new information was obtained.

Data Analysis

As mentioned previously, semi-structured interviews were conducted to achieve the purpose of the study and answer the research questions in a more comprehensive manner. The interviews were then transcribed verbatim. The transcriptions were verified and revised using the audio recording. After iterative readings of the data, a list of codes was created using the NVivo software. To uncover patterns and themes, a hybrid inductive and deductive thematic analysis was conducted. In addition, Braun and Clarke’s (2006) theoretical constructs were applied to analyze the data, which ensures its truthfulness, credibility, and trustworthiness:

- Step 1: Familiarize yourself with the data: the transcripts were read and reread carefully.

- Step 2: Making the initial codes: the transcripts were coded with descriptions of noteworthy content.
- Step 3: Creating themes: the codes were analyzed to generate initial themes—an intercoder-agreement strategy was used to ensure the codes' reliability.
- Step 4: Reviewing themes: an expert in the field then revised the themes.
- Step 5: Defining and naming themes: a definition was provided for each theme to represent it and convey its importance.

The themes were then finalized and amended, as shown in Table 2. To support the research findings, sample extracts are offered. Each participant is identified by a number to protect their identity (e.g., P1 = Participant 1).

Ethical Consideration

All the issues regarding data collection were considered. Ethical approval was granted by ELI, including a comprehensive description of the participants, the study's aims, the study's instruments, and the data collection timeline. All the students participated voluntarily. No names or any personal information was required from participants to ensure their anonymity. The participants were informed that the data would be used exclusively for research purposes and pseudonyms were used instead of real names during the transcript analysis. They were also informed that they were allowed to withdraw at any time during the research.

3. Data Analysis & Results

This study aims to investigate the impact of TASS on EFL student engagement via BPN in virtual classrooms. Thus, four main research questions were formulated to achieve this aim; a) What is the impact of the teacher autonomy supportive style on EFL student engagement in virtual classrooms? b) How basic psychological needs play a mediating role between teacher autonomy supportive style and student engagement? c) Is there a difference between male and female EFL students in terms of perceived teacher autonomy supportive style, basic psychological needs, and student engagement? d) What are EFL learners' perceptions of the teacher autonomy supportive style practices in terms of their behavioral, cognitive, and emotional engagement in virtual classrooms? To answer these questions, thematic analysis were used to explore the students' perceptions of different TASS practices that contribute to student engagement.

Table 2. Descriptions of themes and subthemes of TASS practices by EFL teachers in virtual classrooms

Theme	Content	Subthemes
The importance of supporting inner motivational resources	Teachers consider and value their students' choices, interests, differences, and needs.	<ul style="list-style-type: none"> • Providing students with options • Considering students' interests • Considering students' individual differences • Understanding students' needs
Satisfying students' BPN	Teachers implement different practices to fulfill the students' basic needs by making them feel autonomous, competent, and related to their teachers and classmates.	<ul style="list-style-type: none"> • Students' autonomy • Students' competence • Students' relatedness
Acknowledge students' perspectives and comments	Teachers listen to and respect negative and positive comments from students.	
Supporting student-centered learning	Teachers encourage their students to play an active role in the learning process.	<ul style="list-style-type: none"> • The effective use of Blackboard features • Integrating interactive tools • Applying attraction strategies
Creating a positive classroom atmosphere	Teachers create a positive learning environment by being cooperative and friendly.	<ul style="list-style-type: none"> • Cooperation • Being friendly and displaying a sense of humor

Theme 1: The importance of supporting inner motivational resources

Theme 1 describes the impact of considering students' choices, interests, and differences on their behavioral, cognitive, and emotional engagement. Thematic analysis revealed that teachers support these aspects by using different TASS practices, such as providing students with many options, considering their interests, considering individual differences, and understanding their needs. This theme and related subthemes are explored in the following sections.

Providing students with many options

The majority of students reported that their teachers provide them with limited options related to homework, assignments, and sometimes quizzes. However, teachers occasionally overcome such an issue by giving them a chance to choose the topic they want to write about, how they want to do their homework (using either written or spoken text), and the appropriate day and time for conducting quizzes. All the participants stated that receiving the opportunity to choose had a positive impact on their participation, understanding, productivity, and enjoyment, thus indicating behavioral, cognitive, and emotional engagement. Some of their statements are as follows:

“My teacher provided us with options about topics related to homework...when she let me choose, it made me engage with it more deeply because I choose things I love and enjoy writing about them” (P3).

“If [the teacher] provides me with options that would allow me to choose topics that suit me, it would definitely encourage me to participate and understand the content and my performance would be better” (P2).

However, some students recognize that teachers provide limited choices because of institutional policies and regulations.

“Most of the time, my teacher followed the same system because of the ELI policies, or provided limited choices for assignments based on the date of submission to ensure that they did not coincide with other assignments and quizzes” (P1).

Even though the participants recognize that there are certain policies and rules that teachers cannot overrule, they highly value the choices provided to them related to different aspects of classes, which will positively impact their engagement level.

Students' interests

The student interviews revealed that considering their interests in presenting the lesson, explaining the content, and designing the exercises could have a positive impact on their attention, feeling, and performance, which correspond to their behavioral, emotional, and cognitive engagement. Additionally, some participants highlighted that this practice made them more excited about the lesson, indicating emotional engagement.

“If [the teachers] consider my interests, it means that they will allow me to answer questions related to topics that I am genuinely interested in...I can be more comfortable when answering such questions than those related to something they selected. For example, I do not have a background or interest in music. So, I cannot give a good answer if I am asked me about it. Sometimes it is not because of my language level but because I do not have good knowledge of the topic” (P5).

“If the teacher focuses on our interests, particularly in the methods used to explain the lesson or complete the exercises, it would make me more excited and focused in the class” (P2, P4).

Students' individual differences

According to the students, their teacher considered their individual differences and the variety in proficiency levels by applying various strategies, such as using different methods for teaching, presenting the lessons, and doing homework. The students tended to favor these practices and found them helpful in improving their understanding and participation, indicating cognitive and behavioral engagement.

“My teacher used different methods to deliver certain information. I mean, sometimes she used videos or books or even asked us to explain to each other. Also, I remember if there was someone who didn't understand, she repeated the lesson in a very detailed way until she understood” (P4).

“The teacher always assigned diversified homework. This included videos we watched to answer the questions and games that we could interact with. Even when explaining the lesson, they tried to use various examples and exercises so that everyone could participate and respond. So, students with different language levels could participate in both challenging and easy exercises” (P5).

Understanding students' needs

The students mentioned that they highly valued teachers who could understand them. Some students reported that their teachers understood when they became less active or did not participate using the microphone or chat box in the Blackboard system. The majority of them stated that being understood by their teachers made them feel that their teacher understood their weaknesses and difficulties, which encouraged them to participate, focus, and feel comfortable asking for help, indicating behavioral, cognitive, and emotional engagement.

“When I feel that my teacher understands me well, I know that they can understand my weaknesses and the

things that I couldn't understand...this helps me ask questions comfortably without feeling ashamed" (P1).

"When [my teacher] noticed that our participation and interactions were decreasing...she would give us a break and recommended that we walk, move or drink a cup of coffee so that we could return to a class full of energy...This makes us more focused and active" (P4).

Theme 2: Satisfying students' BPN

The data obtained from the interviews confirmed the findings of the quantitative phase, which indicated that satisfying and fulfilling the students' BPN contributed to fostering student engagement. The thematic analysis revealed different practices and aspects of online teaching that meet these needs and enhance student engagement. The theme includes three subthemes, namely, students' autonomy, competence, and relatedness. These subthemes are further explored in the following sections.

Students' autonomy

The students reported that attending EFL classes via Blackboard gave them more space and freedom than in traditional classrooms. Some students mentioned that such a learning environment provided them with a sense of freedom. Additionally, going back to recorded classes allowed them to review the lesson again if they failed to understand it. Some students highlighted certain practices of their teachers that made them feel autonomous, such as giving them the opportunity to choose and make some decisions related to the class, including the selection of their break time. According to the majority of students, this feeling of autonomy contributed positively and strongly to their cognitive and emotional engagement.

"Online classes make me feel that everything depends on me, in terms of studies or learning. In contrast, in-person classes provide a specific path that you must follow" (P2).

"An advantage of online classes is that whenever I was unable to attend the lecture or did not understand the lesson, I felt free to go back to the recording and repeat it as much as required...This was the best feature for me...it helped me understand the lessons better" (P5).

"I feel free when the teachers provide us with many options...For example, in presentation topics, they make us choose the topic and how we want to present...It makes me more excited about the presentation" (P1).

"Sometimes, we had the freedom to decide when it was time for a break or to submit the daily assignments...Not everything is forced on us" (P3).

Students' competence

The majority of participants mentioned that they could achieve their goals and that their teachers played a crucial role in helping them towards achieving such thing by enhancing their feeling of competence, which enforced their behavioral engagement. The students reported that their teacher instilled confidence in them regarding their abilities to achieve their goals by encouraging them to try harder, using positive language, and considering their abilities while explaining the lesson or asking questions.

"I remember when my teacher said that my answers were perfect. This made me feel capable of achieving my goals...It motivated me to participate more in the classroom" (P2).

"My teachers always encouraged me to try even if I got any answers wrong...They repeated the explanations several times to ensure that I understood the content. Also, they did not put me under pressure. I could participate and answer as much as I can" (P4).

Students' relatedness

The majority of participants reported that the quality of their relationships with teachers and peers within the online classrooms influenced their behavioral, cognitive, and emotional engagement. According to them, even though the online context isolated them from their teachers and classmates, the interactions during class and some informal conversations contributed to building strong relationships with them. The positive relationships with their teachers made them more comfortable, excited, and focused during class, indicating behavioral and emotional engagement. In addition, they said that these relationships encouraged them to invest greater effort and ensure that the teachers were satisfied with their level of proficiency, indicating cognitive engagement. In contrast, their relationships with their peers enabled them to ask for help and participate in classes with confidence that they would not be laughed at or judged, which indicates behavioral engagement.

"The strong relationship with my teacher positively affected me. Although the classes were four hours long, I did not feel bored or that the class was very long...I was happy during the class" (P2).

“The good relationship with my teacher made me more active and engaged even if I was exhausted or had other work. I always tried to participate and focus in the class. I studied hard to make [the teacher] happy with my grades” (P4).

“I had developed a strong relationship with my classmates, which encouraged me to participate; I did not feel ashamed when I had a wrong answer...I felt comfortable even if I committed mistakes because I knew they would not laugh at me” (P5).

Theme 3: Acknowledge students’ perspectives and comments

The thematic analysis revealed that students highly appreciate their teachers’ acceptance and respect of their negative and positive comments. However, only two students stated that they could give their teacher negative feedback related to the lesson or their teaching style. In contrast, the majority of students feared giving negative comments, particularly those related to teaching practices. This was largely because they feared negative consequences on their studies and grades. In addition, they feared that the teachers may misunderstand their comments or take them personally. Even though the majority were hesitant about taking this step, the participants reported that giving them a space to express their opinions and comments could help improve the quality of the class, encouraging them to debate and participate, and making them feel comfortable (behavioral, cognitive, and emotional engagement).

“If my teacher would listen to my negative comment and accept it with openness, my participation in the classroom would definitely increase and I would not hesitate to speak with them because I would know that this teacher could understand me and accept my opinions” (P5).

“Since teachers can understand the various factors that negatively impact students, they should try to solve them and improve the quality of the class. This would reduce such challenges or negative opinions. Thus, every student would feel comfortable in the class” (P4).

Theme 4: Supporting student-centered learning

Almost all the students recognized that teaching in the online context differs from teaching in person. Students in online classes may become less active and feel more isolated. The majority of them stated that their teachers were professional and made them the main focus of the learning process, which contributed to engaging them behaviorally, cognitively, and emotionally. Thus, this theme explains the methods and practices that teachers implement to create student-centered classrooms. It includes four subthemes: using Blackboard features effectively, integrating interactive tools, and applying attraction strategies. These subthemes are discussed in the following sections.

The effective use of Blackboard features

Interview data from all the students revealed that the effective use of technology, particularly on the blackboard, plays an essential role in engaging self-isolating students and making them more active. They highlighted different features used by their teachers that contributed to engaging them cognitively and behaviorally. Using a Whiteboard was one of the most favored features among the students. According to them, this feature helped them explain or deliver their ideas and interact easily with their peers and teachers, indicating cognitive engagement.

“The teacher made us use the whiteboard to present our ideas by writing or drawing, depending on the lesson...When I used it, I felt that I was interacting with my peers just like in an in-person classroom...It made me feel that I could easily convey my thoughts” (P1).

A break-out room is another feature that students like to use as it creates a sense of cooperation and attracts their attention. All the participants stated that using this feature made them more active. They reported that working in groups encouraged them to cooperate, discuss and provide ideas and comments to their peers, indicating behavioral and cognitive engagement.

“The most wonderful method my teacher used is the break-out rooms, through which we were separated into small groups of five students with differing levels of language proficiency. You may find a student whose level is very low or another whose level is very good. The groups brought us together so that we could help each other and the teacher may also help us...This way of teaching made me more focused in the class” (P3).

“It increased my focus when [the teacher] made us work in groups. We would be divided into groups and asked to perform activities, such as reading a passage and discussing it together. We then divided the passage amongst ourselves and each student would read their section. We would then discuss it with each

other, after which the teacher would bring us back to the main room and discuss it with us...It made me more active in the class” (P4).

Online assignment is another good feature that Blackboard provides. The students highly valued this feature as it helped them to revise the lesson and complete the daily assignment easily, indicating cognitive engagement. However, one student stated that while online assignments are suitable for mid-term and final examination preparations, teachers should give them enough time and more than one chance to attempt them.

“Personally, I like online assignments and would do them immediately after class. I could revise what I had learned and complete the assignment at the same time” (P3).

“I like online assignments. I learned from my mistakes so I could avoid making them in the mid-term or final examinations but, in my opinion, one day was not enough to complete the assignment. If the teacher had given us additional time and a chance to resubmit the assignment, that would have been better” (P5).

The majority of students emphasized the importance of providing a clear description for online assignments, quizzes, and tasks as it helps them understand and meet the requirements without bothering the teacher or waiting for them to answer their questions, thus indicating cognitive engagement.

“If the teachers give us a detailed description of the assignment requirements, I do not need to return to them to ask questions and wait for a response. I just cover what is required in the questions” (P4, P2).

None of the participants were aware of the discussion forum feature and had not used it previously. According to P4 and P5, they “had never used this feature, while P3 had seen it “on the blackboard” but had never used it.

Integrating interactive tools

The students reported that they preferred online classes because their teachers used various tools that allowed them to interact with the lesson and enhance their behavioral, cognitive, and emotional engagement. These included videos, interactive books, and attractive PowerPoint presentations, which easily delivered the content and attracted their attention, promoting behavioral and cognitive engagement. In addition, the students appreciated teachers who used games and tricky questions, which made them enjoy the classes and created a sense of competition, indicating emotional engagement.

“When I see a presentation with many pictures and concept maps...I will absorb the information more easily than if the teacher used a book or a set of words” (P3).

“I liked classes in which the teachers used videos...They were enjoyable and effective in delivering the content. They helped me to listen and I could understand what they were saying very easily” (P4).

My teacher liked using educational games, such as Kahoot or Roulette, which made the classes very enjoyable. They made me excited to answer quickly and achieve first place (P2).

Applying attraction strategies

According to the students, although their teachers could not see them in the virtual classroom, they kept attracting their attention by suddenly taking attendance or calling them by their names. This created an active learning environment and made the students more focused, allowing them to participate in the class, which indicates cognitive and behavioral engagement. They also kept asking questions and encourage their students to participate and resolve any queries.

“Even though the Blackboard automatically takes attendance, my teacher had the list of our names and started calling us randomly. We had to raise our hands using the Blackboard bottom so that [the teacher] could verify who was listening and who was not. This way, she could ensure that we were all present and attentive...This made me focus on the class all the time” (P3).

“When the teacher was asking us questions, we responded using the chat feature. If [the teacher] noticed that some students were not participating, they would start calling them by their names to ensure that they understood the content. They were also asked if they had any queries...We were all aware that we had to focus and understand the content to be able to participate” (P2).

Theme 5: Creating a positive classroom atmosphere

This theme describes the vital role of teachers in creating a positive class atmosphere and enhancing student engagement. It includes three subthemes, namely, cooperation, being friendly, and displaying a sense of humor. The following sections explain these subthemes in detail.

Cooperation

The thematic analysis revealed that the students valued cooperative and flexible teachers. They stated that their teachers cooperated with them by welcoming and answering their questions inside or outside the classroom, allotting enough time for each student, repeating the explanations if needed, and trying to solve the technique problems. In addition, the students mentioned that when they felt that their teacher was cooperative and trying to help them, their feeling of isolation decreased, their understanding of the subject improved, and they received encouragement to ask questions, indicating cognitive engagement.

“The teachers helped us by explaining the lesson again in detail if someone did not understand...They also welcomed our questions and gave us a chance to participate...This helped me understand the lesson and encouraged me to ask questions if I did not understand something” (P2).

“My teacher was very cooperative outside work hours...and was available whenever we had queries. Due to this, I never felt like I was in an isolated environment. [The teacher] answered my questions and helped me whenever I faced a technical problem” (P1).

Being friendly and displaying a sense of humor

Approximately half of the participants observed a connection between friendly and funny teachers and their behavioral and emotional engagement in those classes. The students reported that their teacher tried to create an enjoyable and kind environment in the classroom by telling them that they did not have to worry about wrong answers. In addition, some participants stated that their teachers told jokes and funny stories, which make them pay attention and get excited about the class.

According to the majority of students, the personality of the teacher impacted their level of participation. They preferred using the microphone if the teacher was kind and friendly. However, they preferred using the chat feature if the teacher was serious and strict. Most of the students found it challenging to use the microphone with the very strict teacher, especially in EFL classes, as they were learning a foreign language and were likely to commit mistakes related to grammar or pronunciation while speaking.

“I enjoyed attending English class because I knew that my teacher was very friendly...and very kind to everyone in the class... [The teacher] was always reminding us that she is not a monster, so we did not have to worry about getting things wrong” (P4).

“It makes a difference when the teacher tries to create a sense of fun by telling us funny stories and jokes during the class. This makes me excited about the class...I always paid attention and did not log out from Blackboard” (P5).

“Using a sense of humor in online classes makes it more enjoyable for me...I feel that [the teacher] is my friend...It makes me excited to participate and discuss anything comfortably” (P2).

“I choose to participate using a microphone or chat based on whether the teacher is friendly. If I feel that it is acceptable to make mistakes or pronounce a word incorrectly, I prefer using a microphone. This type of teacher encourages me to learn from my mistakes” (P5).

To sum up, this section provided the qualitative data obtained from semi-structured interviews to investigate the impact of TASS on student engagement and explore the students' perceptions of teacher autonomy practices on their behavioral, cognitive, and emotional engagement. The results of the qualitative data revealed different TASS practices that led to engaging students behaviorally, cognitively, and emotionally.

4. Conclusion & Recommendations

This study aimed to investigate the impact of TASS on EFL student engagement via BPN in virtual classrooms. The findings revealed that Saudi EFL students have positive perceptions toward different TASS practices, which are effective behaviors that could keep them engaged in virtual classrooms. Moreover, the main instructional practices within TASS that highly contribute to enhancing their behavioral, cognitive, and emotional engagement include considering students' inner motivational resources, satisfying their BPN, acknowledging their perspectives, supporting student-centered learning, and creating a positive atmosphere in the classroom.

4.1 Pedagogical Implementations

This study aimed to address the lack of studies investigating the effectiveness of TASS in engaging online EFL learners within SDT, particularly in the Saudi context. Thus, it contributes to the literature by emphasizing the critical role of TASS in the virtual environment and presenting evidence regarding the significant relationships between TASS and the different dimensions of student engagement within SDT. Therefore, EFL teachers should aim to create an autonomous, supportive environment by adopting TASS in their virtual classrooms to engage their students behaviorally, cognitively, and emotionally. Therefore, some key pedagogical implications of the

study must be addressed to enable teachers to apply this teaching style and increase their learners' engagement in the virtual context.

First, teachers should focus on their students' choices, interests, differences, and needs. Particularly in online classrooms, students should be given greater freedom of choice and control over their education, as well as be allowed to participate in the decision-making process. This will liberate them from instructor control and provide them with a sense of guidance in their classes. To do so, teachers should provide students with various types of resources, activities, teaching methods, and strategies that suit their interests and needs and keep them engaged.

Second, teachers in EFL classes should consider the students' BPN, including autonomy, competence, and relatedness, which are powerful predictors of student engagement. This can be achieved by giving all students a chance to participate, selecting lessons that are personally relevant to them and appropriate for their proficiency levels, providing constructive feedback, being approachable, and showing them respect and care. These are just a few examples of how teachers can support learners and fulfilling their BPN.

Third, teachers should welcome learners' suggestions and encourage them to actively seek help when needed. They should also accept students' negative feedback and use their suggestions to develop and enhance the teaching and learning process. Students may hesitate to provide such negative comments about the teaching process; however, teachers should encourage them to reflect on their classes and express their perspectives freely. To do so, teachers should ask students for feedback, provide more opportunities for them to express their opinions, and work to build better relationships with them (Ferguson et al., 2011). They may also encourage their students to write a reflection and consider their comments to improve the quality of the classes. They could also ask their students to provide their perceptions and comments anonymously using role-playing strategies (Robertson, 2017).

Fourth, the findings of the current study draw our attention to the importance of student-centered learning. Students tend to be more isolated in the virtual context; thus, teachers should allow them to play the main role in their learning process to keep them engaged. Moreover, the findings indicate that the integration of technologies is a powerful practice that plays a vital role in creating an active virtual class. This may include the use of blackboard features (whiteboard, break-out rooms, discussion forums), interactive tools (videos, games, slides), and attraction strategies (e.g., calling students by their names).

Fifth, creating a positive atmosphere, in which students feel comfortable interacting with each other and with the teacher, facilitates student engagement in virtual classrooms. For example, to create a positive environment, teachers should be more cooperative and help their students overcome any challenges caused due to the nature of the virtual learning environment, such as technical problems, queries outside work hours, and anxiety. Teachers should also use a sense of humor by developing engaging learning materials. These practices effectively create a positive atmosphere in the classroom and help in building a strong relationship between the teachers and students.

Finally, creating training programs for autonomy-supportive teaching in online learning may be useful. Teachers may face difficulties in understanding their students' expressions or ensuring their engagement in virtual classrooms. These limitations might make it more difficult for them to use TASS in these virtual classes. Thus, training programs on using TASS that consider online-learning settings may lead to improvements in such context.

4.2 Limitations and Recommendations for Future Research

Although this research generated many promising findings, which lead to practical implications for EFL virtual classrooms, some limitations exist. First, the scope of this study was limited in terms of context. For instance, this study focuses only on the perceptions of those students who were enrolled in a full-time online class. It did not include different contexts, such as flipped learning and blended learning. Second, it focuses only on one university among several in Saudi Arabia. Third, this study was limited to EFL students and their perceptions of their teachers. Since teachers play a major role in creating an autonomous, supportive environment, further research can survey both teachers and students to gain insight into both these perspectives. Finally, this study employed mainly a qualitative approach to collect the data, which provide a deeper insight into the impact of TASS on student engagement and their perceptions toward the use of TASS on different dimensions of student engagement. However, further research could use other types of measurements, such as experimental studies and the observation of teacher-student interactions in the classroom. These methods would help to better assess the impact of TASS on the more objective and observable dimensions of engagement.

References

- Ahshan, R. (2021). A framework of implementing strategies for active student engagement in remote/online teaching and learning during the COVID-19 pandemic. *Education Sciences*, 11(9), 483. <https://doi.org/10.3390/educsci11090483>
- Alamri, H., Lowell, V., Watson, W., & Watson, S. L. (2020). Using personalized learning as an instructional approach to motivate learners in online higher education: Learner self-determination and intrinsic motivation. *Journal of Research on Technology in Education*, 52(3), 322–352. <https://doi.org/10.1080/15391523.2020.1728449>
- Alfifi, A. (2020, April 20). *After coronavirus: Our education towards the best*. Alriyadh Newspaper. Retrieved from <https://www.alriyadh.com/1816856>
- Almusharraf, N. M., & Bailey, D. (2021). Online engagement during COVID-19: Role of agency on collaborative learning orientation and learning expectations. *Journal of Computer Assisted Learning*, 37(5), 1285–1295. <https://doi.org/10.1111/jcal.12569>
- Appleton, J. J., Christenson, S. L., & Furlong, M. J. (2008). Student engagement with school: Critical conceptual and methodological issues of the construct. *Psychology in the Schools*, 45(5), 369–386. <https://doi.org/10.1002/pits.20303>
- Baloran, E. T., Hernan, J. T., & Taoy, J.S. (2021). Course satisfaction and student engagement in online learning amid COVID-19 pandemic: A structural equation model. *Turkish Online Journal of Distance Education*, 22(4), 1–12. <https://doi.org/10.17718/tojde.1002721>
- Bandura, A. (1978). The self system in reciprocal determinism. *American Psychologist*, 33(4), 344–358. <https://doi.org/10.1037/0003-066X.33.4.344>
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory* (1st ed.). SAGE Publications.
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117, 497–529. <https://doi.org/10.1037/0033-2909.117.3.497>
- Bedenlier, S., Bond, M., Buntins, K., Zawacki-Richter, O., & Kerres, M. (2020). Facilitating student engagement through educational technology in higher education: A systematic review in the field of arts and humanities. *Australasian Journal of Educational Technology*, 36(4), 126–150. <https://doi.org/10.14742/ajet.5477>
- Bergdahl, N., Nouri, J., Fors, U., & Knutsson, O. (2020). Engagement, disengagement and performance when learning with technologies in upper secondary school. *Computers & Education*, 149, 103783. <https://doi.org/10.1016/j.compedu.2019.103783>
- Brackett, M. A., Reyes, M. R., Rivers, S. E., Elbertson, N. A., & Salovey, P. (2011). Classroom emotional climate, teacher affiliation, and student conduct. *Journal of Classroom Interaction*, 46(1), 27–36.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101. <https://doi.org/10.1191/1478088706qp063oa>
- Bygate, M., & Samuda, V. (2009). Creating pressure in task pedagogy: The joint roles of field, purpose, and engagement within the interaction approaches. In A. Mackey & C. Polio (Eds.), *Multiple Perspectives on Interaction: Second Language Research in Honour of Susan M. Gass* (pp. 90–116). Routledge.
- Cattell, R. B. (1966). The scree test for the number of factors. *Multivariate Behavioral Research*, 1(2), 245–276. https://doi.org/10.1207/s15327906mbr0102_10
- Chen, K. C., & Jang, S. J. (2010). Motivation in online learning: Testing a model of self-determination theory. *Computers in Human Behavior*, 26(4), 741–752. <https://doi.org/10.1016/j.chb.2010.01.011>
- Chiu, T. K. F. (2021). Student engagement in K-12 online learning amid COVID-19: A qualitative approach from a self-determination theory perspective. *Interactive Learning Environments*, 1–14. <https://doi.org/10.1080/10494820.2021.1926289>
- Chiu, T. K. F. (2022). Applying the self-determination theory (SDT) to explain student engagement in online learning during the COVID-19 pandemic. *Journal of Research on Technology in Education*, 54(S1), S14–S30. <https://doi.org/10.1080/15391523.2021.1891998>
- Chiu, T. K. F., & Hew, T. K. F. (2018). Asynchronous online discussion forum in MOOCs: Does openness matter

- for peer learning and performance? *Australasian Journal of Educational Technology*, 34(4), 16–28. <https://doi.org/10.14742/ajet.3240>
- Coates, H. (2007). A model of online and general campus-based student engagement. *Assessment & Evaluation in Higher Education*, 32(2), 121–141. <https://doi.org/10.1080/02602930600801878>
- Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education* (6th ed.). Routledge. <https://doi.org/10.4324/9780203029053>
- Cohen, L., Manion, L., & Morrison, K. (2017). *Action research*. In *Research methods in education* (pp. 440–456). Routledge. <https://doi.org/10.4324/9781315456539-22>
- Connell, J. P. (1990). Context, self, and action: A motivational analysis of self-system processes across the life span. In D. Cicchetti & M. Beeghly (Eds.), *The self in transition: Infancy to childhood* (pp. 61–97). University of Chicago Press.
- Connell, J. P., & Wellborn, J. G. (1991). Competence, autonomy, and relatedness: A motivational analysis of self-system processes. In M. R. Gunnar & L. A. Sroufe (Eds.), *Self-processes and development* (pp. 43–77). Lawrence Erlbaum Associates, Inc.
- Council of Europe. (2001). Common reference levels. In *Common European framework of reference for languages: Learning, teaching, assessment* (pp. 21–42). Cambridge University Press.
- Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed method approaches*. SAGE Publications.
- Crotty, M. J. (1998). *The foundations of social research: Meaning and perspective in the research process*. Routledge. <https://doi.org/10.4324/9781003115700>
- Deci, E. L. (1975). *Intrinsic motivation*. Plenum Press. <https://doi.org/10.1007/978-1-4613-4446-9>
- Deci, E. L., & Ryan, R. M. (1985). The general causality orientations scale: Self-determination in personality. *Journal of Research in Personality*, 19(2), 109–134. [https://doi.org/10.1016/0092-6566\(85\)90023-6](https://doi.org/10.1016/0092-6566(85)90023-6)
- Deci, E. L., Schwartz, A., Sheinman, L., & Ryan, R. M. (1981). An instrument to assess adult's orientations toward control versus autonomy in children: Reflections on intrinsic motivation and perceived competence. *Journal of Educational Psychology*, 73(5), 642–650. <https://doi.org/10.1037/0022-0663.73.5.642>
- Dewey, J. (1998). *The essential Dewey: Pragmatism, education, democracy* (Vol. 1). Indiana University Press. <https://doi.org/10.5860/choice.36-3259>
- Dikko, M. (2016). Establishing construct validity and reliability: Pilot testing of a qualitative interview for research in Takaful (Islamic insurance). *The Qualitative Report*, 21(3), 521–258. <https://doi.org/10.46743/2160-3715/2016.2243>
- Dincer, A. (2014). *Antecedents and outcomes of self-determined engagement in Turkish EFL classrooms: A mixed-method approach*. Doctoral dissertation, University of Alberta.
- Dincer, A., Yesilyurt, S., & Takkac, M. (2012). The effects of autonomy-supportive climates on EFL learner's engagement, achievement and competence in English speaking classrooms. *Procedia – Social and Behavioral Sciences*, 46, 3890–3894. <https://doi.org/10.1016/j.sbspro.2012.06.167>
- Dörnyei, Z. (2007). *Research methods in applied linguistics*. Oxford University Press.
- Dörnyei, Z. (2019). Towards a better understanding of the L2 learning experience, the Cinderella of the L2 motivational self-system. *Studies in Second Language Learning and Teaching*, 9(1), 21–32. <https://doi.org/10.14746/ssllt.2019.9.1.2>
- Dörnyei, Z., & Kormos, J. (2000). The role of individual and social variables in oral task performance. *Language Teaching Research*, 4(3), 275–300. <https://doi.org/10.1177/136216880000400305>
- Drever, E. (1995). *Using semi-structured interviews in small-scale research: A teacher's guide*. Scottish Council for Research in Education.
- Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G* Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39(2), 175–191. <https://doi.org/10.3758/BF03193146>
- Ferguson, D. L., Hanreddy, A., & Draxton, S. (2011). Giving students voice as a strategy for improving teacher practice. *London Review of Education*, 9(1), 55–70. <https://doi.org/10.1080/14748460.2011.550435>

- Finn, J. D. (1989). Withdrawing from school. *Review of Educational Research*, 59(2), 117–142. <https://doi.org/10.3102/00346543059002117>
- Finn, J. D., & Rock, D. A. (1997). Academic success among students at risk for school failure. *Journal of Applied Psychology*, 82(2), 221–234. <https://doi.org/10.1037/0021-9010.82.2.221>
- Finn, J. D., & Zimmer, K. S. (2012). Student engagement: What is it? Why does it matter? In S. L. Christenson, A. L. Reschly & C. Wylie (Eds.), *Handbook of Research on Student Engagement* (pp. 97–131). Springer. https://doi.org/10.1007/978-1-4614-2018-7_5
- Flowerday, T., & Schraw, G. (2000). Teacher beliefs about instructional choice: A phenomenological study. *Journal of Educational Psychology*, 92(4), 634–645. <https://doi.org/10.1037/0022-0663.92.4.634>
- Fowler, F. J. (2009). *Survey research methods* (4th ed.). SAGE Publications. <https://doi.org/10.4135/9781452230184>
- Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, 74(1), 59–109. <https://doi.org/10.3102/00346543074001059>
- Ganiyu, S. A., Ebohon, J. O., & Ajayi, O. T. (2020). Understanding research paradigm in social sciences: A critique of two papers on critical success factors for BIM implementation. *Environmental Technology*, 2(1), 64–70.
- George, D., & Mallery, M. (2010). *SPSS for Windows step by step: A simple guide and reference, 17.0 update* (10th ed.). Pearson Education India.
- Guba, E. (1981). Criteria for assessing the trustworthiness of naturalistic inquiries. *Educational Communication and Technology Journal*, 29(2), 75–92. <https://doi.org/10.1007/bf02766777>
- Guest, G., MacQueen, K. M. & Namey, E. E. (2012). *Applied thematic analysis*. SAGE Publications. <https://doi.org/10.4135/9781483384436>
- Harris, L. (2011). Secondary teachers' conceptions of student engagement: Engagement in learning or in schooling? *Teaching and Teacher Education*, 27, 376–386. <https://doi.org/10.1016/j.tate.2010.09.006>
- Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford Publications.
- Helme, S., & Clarke, D. (2001) Identifying cognitive engagement in the mathematics classroom. *Mathematics Education Research Journal*, 13(2), 133–153. <https://doi.org/10.1007/bf03217103>
- Henrie, C. R., Halverson, L. R., & Graham, C. R. (2015). Measuring student engagement in technology-mediated learning: A review. *Computers & Education*, 90, 36–53. <https://doi.org/10.1016/j.compedu.2015.09.005>
- Hu, M., & Li, H. (2017). *Student engagement in online learning: A review* (pp. 39–43). 2017 International Symposium on Educational Technology (ISET). <https://doi.org/10.1109/ISET.2017.17>
- Iskander, M. (Ed.). (2008). *Innovative techniques in instruction technology, e-learning, e-assessment, and education*. Springer Science & Business Media. <https://doi.org/10.1007/978-1-4020-8739-4>
- Jang, H., Kim, E. J., & Reeve, J. (2012). Longitudinal test of self-determination theory's motivation mediation model in a naturally occurring classroom context. *Journal of Educational Psychology*, 104(4), 1175–1188. <https://doi.org/10.1037/a0028089>
- Jang, H., Reeve, J., & Deci, E. L. (2010). Engaging students in learning activities: It is not autonomy support or structure but autonomy support and structure. *Journal of Educational Psychology*, 102(3), 588–600. <https://doi.org/10.1037/a0019682>
- Jimerson, S., Campos, E., & Greif, J. (2003). Towards an understanding of definitions and measures of student engagement in schools and related terms. *The California School Psychologist*, 8(1), 7–28. <https://doi.org/10.1007/bf03340893>
- Joshi, A., Kale, S., Chandel, S., & Pal, D. (2015). Likert Scale: Explored and explained. *British Journal of Applied Science & Technology*, 7(4), 396–403. <https://doi.org/10.9734/bjast/2015/14975>
- Jung, Y., & Lee, J. (2018). Learning engagement and persistence in massive open online courses (MOOCS). *Computers and Education*, 122, 9–22. <https://doi.org/10.1016/j.compedu.2018.02.013>
- Keengwe, J., & Kidd, T. T. (2010). Towards best practices in online learning and teaching in higher education.

- MERLOT Journal of Online Learning and Teaching*, 6(2), 533–541.
- King Abdulaziz University. (2022, October). *English Language Institute, Preparatory year English language program*. Retrieved from <https://eli.kau.edu.sa/Pages-preparatory-year-program-en.aspx>
- Korlat, S., Kollmayer, M., Holzer, J., Lüftenegger, M., Pelikan, E. R., Schober, B., & Spiel, C. (2021). Gender differences in digital learning during COVID-19: Competence beliefs, intrinsic value, learning engagement, and perceived teacher support. *Frontiers in Psychology*, 12, 1–12. <https://doi.org/10.3389/fpsyg.2021.637776>
- Kuhn, S. T. (1962). *The Structure of Scientific Revolutions* (2nd ed.). University of Chicago Press.
- Lambert, C., Philp, J., & Nakamura, S. (2017) Learner-generated content and engagement in second language task performance. *Language Teaching Research*, 21, 665–680. <https://doi.org/10.1177/1362168816683559>
- Lawson, M. A., & Lawson, H. A. (2013). New conceptual frameworks for student engagement research, policy, and practice. *Review of Educational Research*, 83(3), 432–479. <https://doi.org/10.3102/0034654313480891>
- Lee, E., Pate, J. A., & Cozart, D. (2015). Autonomy support for online students. *Tech Trends*, 59(4), 54–61. <https://doi.org/10.1007/s11528-015-0871-9>
- Li, W., Gao, W., & Sha, J. (2020). Perceived teacher autonomy support and school engagement of Tibetan students in elementary and middle schools: Mediating effect of self-efficacy and academic emotions. *Frontiers in Psychology*, 11, 1–9. <https://doi.org/10.3389/fpsyg.2020.00050>
- Lietaert, S., Roorda, D., & Laevers, F. (2015). The gender gap in student engagement: The role of teachers' autonomy support, structure, and involvement. *British Journal of Educational Psychology*, 85(4), 498–518. <https://doi.org/10.1111/bjep.12095>
- Liu, P. (2021). Influence of psychological need-based teachers' autonomy support on effectiveness and engagement in English learning. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.663374>
- Luan, L., Hong, J. C., Cao, M., Dong, Y., & Hou, X. (2020). Exploring the role of online EFL learners perceived social support in their learning engagement: A structural equation model. *Interactive Learning Environments*, 28, 1–12. <https://doi.org/10.1080/10494820.2020.1855211>
- Mackay, A., & Gass, S. (2005). *Second language research: Methodology and design*. Lawrence Erlbaum Associates Publishers.
- Martin, A. J. (2008). Enhancing student motivation and engagement: The effects of a multidimensional intervention. *Contemporary Educational Psychology*, 33(2), 239–269. <https://doi.org/10.1016/j.cedpsych.2006.11.003>
- Martin, F., & Bolliger, D. U. (2018). Engagement matters: Student perceptions on the importance of engagement strategies in the online learning environment. *Online Learning Journal*, 22(1), 205–222. <https://doi.org/10.24059/olj.v22i1.1092>
- Matos, L., Reeve, J., Herrera, D., & Claux, M. (2018). Students' agentic engagement predicts longitudinal increases in perceived autonomy-supportive teaching: The squeaky wheel gets the grease. *Journal of Experimental Education*, 86(4), 579–596. <https://doi.org/10.1080/00220973.2018.1448746>
- Morse, J. M. (1995). The significance of saturation. *Qualitative Health Research*, 5(2), 147–149. <https://doi.org/10.1177/104973239500500201>
- Navarro-Patón, R., Lago-Ballesteros, J., Basanta-Camiño, S., & Giráldez, V. A. (2018). Assessment of the basic psychological needs in physical education according to age, gender and educational stage. *Journal of Human Sport and Exercise*, 13(3), 710–719. <https://doi.org/10.14198/jhse.2018.133.20>
- Newmann, F. M., Wehlage, G. G., & Lamborn, S. D. (1992). The significance and sources of student engagement. In F. M. Newmann (Ed.), *Student engagement and achievement in American secondary schools* (pp. 11–39). Teachers College Press.
- Noels, K. A. (2013). Learning Japanese; learning English: Promoting motivation through autonomy, competence and relatedness. In M. Apple, D. Da Silva & T. Fellner (Eds.), *Language learning motivation in Japan* (pp. 15–34). Multilingual Matters. <https://doi.org/10.21832/9781783090518-004>
- Núñez, J. L., & León, J. (2019). Determinants of classroom engagement: A prospective test based on self-determination theory. *Teachers and Teaching: Theory and Practice*, 25(2), 147–159. <https://doi.org/10.1080/13540602.2018.1542297>

- Oga-Baldwin, W. Q. (2019). Acting, thinking, feeling, making, collaborating: The engagement process in foreign language learning. *System*, 86, 102128. <https://doi.org/10.1016/j.system.2019.102128>
- Oraif, I., & Elyas, T. (2021). The impact of COVID-19 on learning: Investigating EFL learners' engagement in online courses in Saudi Arabia. *Education Sciences*, 11(3), 1–19. <https://doi.org/10.3390/educsci11030099>
- Pallant, J. (2011). *SPSS Survival Manual: A step-by-step guide to data analysis using SPSS* (4th ed.). Crows Nest: Allen & Unwin.
- Parker, J. S., Parris, L., Lau, M., Dobbins, A., Shatz, L., Porush, S., & Wilkins, B. (2021). Perceived teacher autonomy support and self-determination skill expression: Predictors of student engagement among African American high school students. *Journal of Black Psychology*, 47(6), 445–475. <https://doi.org/10.1177/00957984211009190>
- Patall, E. A., Cooper, H., & Wynn, S. R. (2010). The effectiveness and relative importance of choice in the classroom. *Journal of Educational Psychology*, 102(4), 896–915. <https://doi.org/10.1037/a0019545>
- Patall, E. A., Dent, A. L., Oyer, M., & Wynn, S. R. (2013). Student autonomy and course value: The unique and cumulative roles of various teacher practices. *Motivation and Emotion*, 37(1), 14–32. <https://doi.org/10.1007/s11031-012-9305-6>
- Patton, M. Q. (2014). *Qualitative research & evaluation methods: Integrating theory and practice* (4th ed.). SAGE Publications.
- Pekrun, R., & Linnenbrink-Garcia, L. (2012). Academic emotions and student engagement. In S. L. Christenson, A. L. Reschly & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 259–282). Springer. https://doi.org/10.1007/978-1-4614-2018-7_12
- Philp, J., & Duchesne, S. (2016). Exploring engagement in tasks in the language classroom. *Annual Review of Applied Linguistics*, 36(3), 50–72. <https://doi.org/10.1017/S0267190515000094>
- Pianta, R. C., Hamre, B. K., & Allen, J. P. (2012). Teacher-student relationships and engagement: Conceptualizing, measuring, and improving the capacity of classroom interactions. In S. L. Christenson, A. L. Reschly & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 365–386). Springer. https://doi.org/10.1007/978-1-4614-2018-7_17
- Reeve, J. (2012). A self-determination theory perspective on student engagement. In S. L. Christenson, A. L. Reschly & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 21–44). Springer. https://doi.org/10.1007/978-1-4614-2018-7_7
- Reeve, J. (2013). How students create motivationally supportive learning environments for themselves: The concept of agentic engagement. *Journal of Educational Psychology*, 105(3), 579–595. <https://doi.org/10.1037/a0032690>
- Reeve, J. (2015). Giving and summoning autonomy support in hierarchical relationships. *Social and Personality Psychology Compass*, 9(8), 406–418. <https://doi.org/10.1111/spc3.12189>
- Reeve, J., & Halusic, M. (2009). How K-12 teachers can put self-determination theory principles into practice. *School Field*, 7(2), 145–154. <https://doi.org/10.1177/1477878509104319>
- Reeve, J., & Jang, H. (2006). What teachers say and do to support students' autonomy during a learning activity. *Journal of Educational Psychology*, 98(1), 209–218. <https://doi.org/10.1037/0022-0663.98.1.209>
- Reeve, J., Jang, H., Carrell, D., Jeon, S., & Barch, J. (2004). Enhancing students' engagement by increasing teachers' autonomy support. *Motivation and Emotion*, 28(2), 147–169. <https://doi.org/10.1023/b:moem.0000032312.95499.6f>
- Reeve, J., & Sickenius, B. (1994). Development and validation of a brief measure of the three psychological needs underlying intrinsic motivation: The AFS scales. *Educational and Psychological Measurement*, 54(2), 506–515. <https://doi.org/10.1177/0013164494054002025>
- Reeve, J., & Tseng, C. M. (2011). Agency as a fourth aspect of students' engagement during learning activities. *Contemporary Educational Psychology*, 36(4), 257–267. <https://doi.org/10.1016/j.cedpsych.2011.05.002>
- Reschly A. L., & Christenson, S. L. (2012). Jingle, jangle, and conceptual haziness: Evolution and future directions of the engagement construct. In S. L. Christenson, A. L. Reschly & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 3–19). Springer. https://doi.org/10.1007/978-1-4614-2018-7_1
- Robertson, J. (2017). Rethinking learner and teacher roles: Incorporating student voice and agency into teaching

- practice. *Journal of Initial Teacher Inquiry*, 3, 41. <http://hdl.handle.net/10092/14638>
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68–78. <https://doi.org/10.1037/0003-066x.55.1.68>
- Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation development and wellness*. Guilford Press. <https://doi.org/10.1521/978.14625/28806>
- Saeki, E., & Quirk, M. (2015). Getting students engaged might not be enough: The importance of psychological needs satisfaction on social-emotional and behavioral functioning among early adolescents. *Social Psychology of Education*, 18(2), 355–371. <https://doi.org/10.1007/s11218-014-9283-5>
- Scotland, J. (2012). Exploring the philosophical underpinnings of research: Relating ontology and epistemology to the methodology and methods of the scientific, interpretive, and critical research paradigms. *English Language Teaching*, 5(9), 9–16. <https://doi.org/10.5539/elt.v5n9p9>
- Shernoff, D. J. (2013). *Optimal learning environments to promote student engagement*. Springer. <https://doi.org/10.1007/978-1-4614-7089-2>
- Shih, S. S. (2008). The relation of self-determination and achievement goals to Taiwanese eighth graders' behavioral and emotional engagement in schoolwork. *Elementary School Journal*, 108(4), 313–334. <https://doi.org/10.1086/528974>
- Singh, V., & Thurman, A. (2019). How many ways can we define online learning? A systematic literature review of definitions of online learning (1988–2018). *American Journal of Distance Education*, 33(4), 289–306. <https://doi.org/10.1080/08923647.2019.1663082>
- Skinner, E. A. (1995). *Perceived control, motivation, and coping*. SAGE Publications. <https://doi.org/10.4135/9781483327198>
- Skinner, E. A., Furrer, C., Marchand, G., & Kindermann, T. (2008). Engagement and disaffection in the classroom: Part of a larger motivational dynamic? *Journal of Educational Psychology*, 100(4), 765–781. <https://doi.org/10.1037/a0012840>
- Skinner, E. A., Kindermann, T. A., Connell, J. P., & Wellborn, J. G. (2009). Engagement and disaffection as organizational constructs in the dynamics of motivational development. In K. Wentzel & A. Vigfield (Eds.), *Handbook of motivation at school* (pp. 223–245). Routledge.
- Skinner, E. A., & Pitzer, J. R. (2012). Developmental dynamics of student engagement, coping, and everyday resilience. In S. L. Christenson, A. L. Reschly & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 21–44). Springer. https://doi.org/10.1007/978-1-4614-2018-7_2
- Sue, V. M., & Ritter, L. A. (2012). *Conducting online surveys*. SAGE Publications. <https://doi.org/10.4135/9781506335186>
- Sulis, G., & Philp, J. (2021). Exploring connections between classroom environment and engagement in the foreign language classroom. In P. Hiver, A. H. Al-Hoorie & S. Mercer (Eds.), *Student engagement in the language classroom* (pp. 101–119). Multilingual Matters.
- Susanti, Y. (2020). The students' engagement in EFL online class. *Lingual: Journal of Language and Culture*, 10(2), 8. <https://doi.org/10.24843/ljlc.2020.v10.i02.p02>
- Svalberg, A. M. L. (2009). Engagement with language: Interrogating a construct. *Language Awareness*, 18(3–4), 242–258. <https://doi.org/10.1080/09658410903197264>
- Tian, L., Han, M., & Huebner, E. S. (2014). Preliminary development of the adolescent students' basic psychological needs at school scale. *Journal of Adolescence*, 37(3), 257–267. <https://doi.org/10.1016/j.adolescence.2014.01.005>
- Tison, E. B., Bateman, T., & Culver, S. M. (2011). Examination of the gender-student engagement relationship at one university. *Assessment and Evaluation in Higher Education*, 36(1), 27–49. <https://doi.org/10.1080/02602930903197875>
- Vansteenkiste, M., Sierens, E., Goossens, L., Soenens, B., Dochy, F., Mouratidis, A., ... Beyers, W. (2012). Identifying configurations of perceived teacher autonomy support and structure: Associations with self-regulated learning, motivation and problem behavior. *Learning and Instruction*, 22(6), 431–439. <https://doi.org/10.1016/j.learninstruc.2012.04.002>

- Wahid, H. S. A. W., Rahmat, N. H., Dzuradeen, N. S., & Kadir, N. A. (2020). Are students engaging in online classrooms? *European Journal of Education Studies*, 7(12), 202–222.
- Walker, A., & White, G. (2013). *Technology enhanced language learning: connecting theory and practice-Oxford Handbooks for Language Teachers*. Oxford University Press. <https://doi.org/10.1093/elt/cct069>
- Wang, M. T., Fredricks, J. A., Ye, F., Hofkens, T. L., & Linn, J. S. (2016). The math and science engagement scales: Scale development, validation, and psychometric properties. *Learning and Instruction*, 43, 16–26. <https://doi.org/10.1016/j.learninstruc.2016.01.008>
- Weinstein, C. E., & Mayer, R. E. (1986). The teaching of learning strategies. In M. C. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed., pp. 315–327). Macmillan Publishing Company.
- Williams, G. C., & Deci, E. L. (1996). Internalization of biopsychological values by medical students: A test of self-determination theory. *Journal of Personality and Social Psychology*, 70(4), 767–779. <https://doi.org/10.1037/0022-3514.70.4.767>
- Yang, Y. F. (2011). Engaging students in an online situated language learning environment. *Computer Assisted Language Learning*, 24(2), 181–198. <https://doi.org/10.1080/09588221.2010.538700>
- Zhou, L. H., Ntoumanis, N., & Thøgersen-Ntoumani, C. (2019). Effects of perceived autonomy support from social agents on motivation and engagement of Chinese primary school students: Psychological need satisfaction as mediator. *Contemporary Educational Psychology*, 58, 323–330. <https://doi.org/10.1016/j.cedpsych.2019.05.001>

Copyrights

Copyright for this article is retained by the author, with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).