RedFame

Journal of Education and Training Studies
Vol. 12, No. 2; April 2024
ISSN 2324-805X E-ISSN 2324-8068
Published by Redfame Publishing
URL: http://jets.redfame.com

Enhancing Team-Based Learning by Moderating FIRST-ADLX Framework inTeacher Professional Development

Mohamed Bahgat[1], Zeina Almasri[1], Ashraf Elsafty[2], Ahmed Seddek[2]

[1]Senior Researcher, CEO, SeGa Group, United States. Email: mbahgat@segagroup.net

[1]Educational Researcher, SeGa Group, United States. Email: zalmasri@segagroup.net

[2]Adjunct Assistant Professor, ESLSCA University, Egypt. Email: ashraf.elsafty@eslsca.edu.eg; ashraf@ashrafelsafty.com

[2]Researcher, MBA, Ashraf Elsafty Consulting, Egypt, Email: ahmed.seddek@ashrafelsafty.com

Correspondence: Ashraf Elsafty, Adjunct Assistant Professor, ESLSCA University, Egypt. ORCID ID: https://orcid.org/my-orcid?orcid=0000-0002-9377-7286

Received: February 21, 2024 Accepted: March 22, 2024 Online Published: March 23, 2024

doi:10.11114/jets.v12i2.6755 URL: https://doi.org/10.11114/jets.v12i2.6755

Abstract

Over the past few decades, teacher professional development has increasingly focused on developing teachers' professional skills in the use of TBL (team-based learning) in their classrooms, gaining new insights and perspectives, and enhancing their ability to meet the diverse needs of their students. Consequently, many studies have investigated the effectiveness of learner-centric approaches such as team-based learning, inquiry-based learning, problem-based learning, project-based learning, and others on learner engagement and knowledge acquisition. While such approaches have been found to motivate learners and improve learning outcomes, many teachers have struggled to create an impactful learner experience by following the recommended sequence alone. To address this issue, this paper proposes an integrated approach to designing and facilitating a learner experience using FIRST-ADLX (Focusing – Interacting – Reviewing – Sequencing – Transforming-Active Deep Learner eXperience) Framework to moderate a team-based learning session. The effectiveness of integrating team-based learning within FIRST-ADLX Framework in improving learner engagement, overall satisfaction, and knowledge retention is investigated through an auto-ethnographic research design (Lichtman, 2012; Méndez, 2013; Ellis & Bochner, 2000; Starr, 2010). Results indicate that FIRST-ADLX Framework effectively facilitates communication and collaboration among team members, supports the achievement of learning outcomes, and increases overall satisfaction and engagement. Therefore, using FIRST-ADLX Framework to moderate a learner-centric approach is an effective way to "develop and train teachers on how to understand, experience, practice and have a sustainable impact on learners" (Bahgat *et al.* 2020).and on the other hand to help teachers in several aspects of designing and facilitating a sustainable learning experience for their students.

Keywords: team-Based learning, FIRST-ADLX Framework, active learning, deep learning, Learner eXperience.

1. Introduction

Educators all around the world strive to create an engaging impactful learning experience, however, many of the commonly used learner-centric approaches seem to be missing a crucial piece of the puzzle, resulting in lackluster results (Weimer, 2013). This issue was highlighted by a notable piece of research that questioned the validity of the traditional dichotomy between learner-centered and teacher-centered pedagogy, proposing a sociocultural-constructivist approach that views learning as a process of socio-cultural activities in which learners and facilitators are engaged (Mascolo, 2009).

On a parallel path, Harvey et al. (1992) argued that the student experience encompasses not only what happens inside the classroom but also all aspects of the student's life, so it is not only a process of activities but rather a holistic experience. Benckendorff et al. (2009) further explained that the concept of the student experience is multifaceted and includes various aspects such as teaching methods, academic content, curriculum, learner activities, facilitator's actions, and practices, among others. The authors suggested that this experience is related to how engaged, satisfied, and committed a learner is to learn.

As such, there is a need for a comprehensive framework that views the learner experience as a whole living human experience of emotional, physical, intellectual, or even spiritual aspects, and respecting these aspects as an essential element for creating a memorable and impactful learner experience. In other words, there is a need for a framework that helps teachers understand, experience, design, and facilitate a learning journey that is both effective and sustainable for their students.

"FIRST-ADLX Framework" is a comprehensive approach based on well-known models and theories, including constructivism learning theory, experiential learning, gamification, facilitative learning, the 6Ds model, positive psychology, experience economy, and neuroscience. This engaging framework helps educators to bridge theory and practice and create high-quality learning environments not only in the classrooms but throughout the whole learner experience journey in and out of the classroom (Bahgat, et al., 2017). Consequently, using the framework to moderate a learner-centric approach and ensure that it adheres to the expectations can promote learning and increase its impact.

Hence, the study focuses on a teacher development program composed of Fifteen female schoolteachers from three different Arab countries. The teachers were invited to participate in a learning experience aimed at helping them develop their professional skills in the use of TBL in their classrooms, gain new insights and perspectives, and enhance their ability to meet the diverse needs of their students. The designer used the typical sequence of activities in a TBL classroom but moderated them with the FIRST-ADLX framework's domains, principles, activities, and actions with two main underlying beliefs. The first is that teachers need to live the experience of being learners in a TBL classroom themselves so that they can better design and facilitate such experiences for their students, and the FIRST-ADLX Framework can help them live such an experience since it was successfully proven to be valid as a "TPD (Teacher Professional Development) program that allows teachers to live the learning experience as learners"(Bahgat et al. 2020, p. 47). The second is that implementing this methodology and observing its results from the perspective of a trainer can provide valuable insights for a different context where the trainer is a teacher in a class of students. The applicability of these findings to the teacher-student context is possible, and their potential relevance to other educators in similar situations is a valuable starting point as they offer insights on the effectiveness of synergizing FIRST-ADLX Framework and the common learner-centric methods of teaching for better learning outcomes. The participants were neither familiar with the FIRST-ADLX Framework nor introduced to it during the session. However, the framework was used and applied by the facilitator to design and facilitate the experience.

The disconnect between what is taught in education programs and what teachers face in the classroom creates doubt about the effectiveness of their training and the accuracy of the traditional contrast or conventional division between learner-centered and teacher-centered pedagogy. This study aims to fill this gap by moderating team-based Learning, a learner-centric approach commonly taught in education programs, with the FIRST-ADLX Framework. By implementing the principles and domains of FIRST-ADLX Framework, looking at learners as whole humans in a whole learner eXperience, considering the mental, physical, spiritual, and emotional factors, and gathering feedback on learners' engagement, overall satisfaction, knowledge retention, and ability to transform learning into performance, this research seeks to bridge the gap between theory and practice and help teachers fully utilize what they have learned in their professional development programs. By applying the FIRST-ADLX Framework in a trainer-teacher context, the study highlights the potential of using a trainer-teacher context to leverage the study's findings and subsequently enhance the teacher-student dynamic.

In other words, although the study was conducted in a trainer-teacher context, the methodology is applicable in a teacher-student context, and the results obtained can be scaled in the new context. The contextual differences between a trainer-teacher setting and a teacher-student setting don't affect the relevancy of variables explored in the methodology or the findings for teachers in a classroom setting.

1.1 Program Design and Process

In our previous uses of TBL to design and facilitate Teacher Professional Development (TPD) programs, a key limitation was identified by the researchers. While TBL proved effective, the fact that some team members were not fully engaged in the process was noticeable, and this lack of engagement could have potentially dissatisfied these team members and impacted their learning outcomes. Consequently, FIRST-ADLX was used in a trial to enhance the effectiveness of the TBL environment.

To examine the role of the FIRST-ADLX Framework on teacher-learner engagement, satisfaction, knowledge retention, and ability to transform learning into performance in a TBL classroom, a two-hour learning session to teach TBL was designed and facilitated for teachers who were not familiar with the domains and principles of FIRST-ADLX Framework.TBL was integrated into the FIRST-ADLX Framework, and experience activities were added to the traditional sequence of activities in a TBL classroom along with different actions and practices to apply the domains and principles of the FIRST-ADLX Framework.

1.1.1 Focusing on the Learner Domain

This domain and its three principles were applied throughout the learning journey. To apply the principle of "Individualizing", teacher-learners described themselves using a personality trait they value on WhatsApp a day before the learning session, in the opener activity these adjectives were used so that others could guess the writer. The subject that the learners teach was taken into consideration while dividing the learners into groups for the lesson planning task. In the closure activity at the end of the learning session, the questions they wrote about TBL before the session were presented to be discussed with their names written next to them. They were called by the personal traits they love, and their names were written on the Google documents they used to create the lesson plan.

The principle of "Probing and Assessing" was implemented throughout the learning journey. The learners' understanding and learning were continuously probed and assessed using different pulling techniques and various discussions were raised as they shared their answers. Learners had to explain their choices and discuss different responses so that their responses were properly probed and assessed.

"Trusting the Learner" was also evident as learners were provided with different opportunities to read definitions, provide information, explain instructions, share experiences, lead some activities, etc.

1.1.2 Interacting within the Positive Group Dynamics Domain

To create a "Social Event" out of the learning journey, different types of interaction were facilitated. Learners collaborated in two different groups and interacted almost with all other learners while their discussions were monitored, probed, assessed, encouraged, and praised to ensure a safe engaging learning environment.

The principle of "Positive Spirit" was also applied. Learners were individually greeted and addressed by their preferred personality traits, which provided an opportunity to highlight their points of strength. Their contributions and collaboration were praised and appreciated, and they were encouraged to give and ask for positive, constructive feedback from their peers and facilitators. Key terms were repeated with a fun intonation and stress, and some jokes were made to display a sense of humor.

"Motivation and Attention" were boosted by greeting them in the tone of a basketball host in an important game, adding an energizer in the middle of the session, praising their collaboration, using a shout-out they created, and offering virtual gifts (stickers with their names, a picture of a bouquet of flowers with their names, a video made of pictures taken through the session) to acclaim their contributions. Their attention was also grabbed by using a set of triggering questions that aroused their curiosity and increased their readiness for the following tasks.

1.1.3 Reviewing Activities Domain

The learning activities were all RAR learning activities with three main stages: (Readiness Increase, Activity Facilitation, and Reviewing Actively). Figure 1 summarizes the stages that were followed for each activity.

Consequently, the learners' readiness was increased before every learning activity, and they were guided to actively review and reflect after each stage. Their work was monitored and facilitated, and they were encouraged to reflect on how the learning outcomes related to their lives outside the classroom. Additionally, they were invited to discuss different opportunities to apply what they had learned in the future.

	Readiness Increase	**Activity Facilitation**	**Reviewing Actively**
"The First Learning Activity; Individual Readiness Assurance Test"	Learners were invited to put on their thinking hats and think of the video they watched the day before the session. Learners were provided with instructions and invited to create a shout-out to motivate themselves through the session. Learners were informed that the test results were not important, as they were only used to create diversified groups and they wouldn't even be announced.	Learners had 5 minutes to take the test (6 MCQs about the content) The facilitator monitored time and made sure all learners were on task.	The facilitator invited the learners to share their insights and compare their feelings before and after taking the test.
"The Second Learning Activity; Group Readiness Assurance Test"	Learners were divided into groups taking the test results into consideration. Learners were provided with instructions and invited to use the shoutout they previously created to motivate themselves. Learners were informed that they need to compare, discuss, and agree on one answer for each question. They could also keep notes if they fail to reach an agreement.	Learners retook the test in groups, chose one person to share their answers with others, and took notes if they failed to reach an agreement. Learners were monitored and their discussions were interrupted by the facilitator only to clarify ambiguities.	Using the "What? So What? Now What? reflective model, the learners were invited to reflect on what had happened and how different their achievement was when compared with their individual work.
"The Third Learning Activity; Mini-Presentation"	Learners were informed that a mini presentation would be conducted to summarize the new pieces of information.	A mini presentation was conducted in which the facilitator summarized the new provided knowledge.	Learners were invited to share a word that grabbed their attention in the presentation and to reflect on it.
"The Fourth Learning Activity; Lesson Planning Task"	Learners were divided into new groups taking the subjects they taught into consideration. Learners were provided with instructions and invited to use the shoutout they previously created to motivate themselves. Learners were informed that they need to think of a topic and create a lesson plan using the technique taught. Learners were invited to click on the Google document and make sure they could type in the table provided.	Learners worked in groups and created lesson plans. The facilitator monitored their work, motivated them, clarified ambiguities, and managed time. Learners were encouraged to share their lesson plans with others, receive and give positive constructive feedback.	Learners were motivated to share something new they had learnt while designing, share whether they would use what they had designed in their classroom, share any possible challenges, and suggest solutions to overcome them.

Figure 1. Stages of RAR Domain

1.1.4 Sequencing Domain

In the prior experience mentioned earlier, before getting introduced to the FIRST-ADLX Framework, a learning session with the same objectives was designed to train a group of Lebanese teachers on using TBL in their classrooms. The sequence of activities was that of a typical TBL classroom:

- Pre-class mission: A video, that explains what TBL is, was shared with the participants before the learning session.
- Readiness Assurance Test One: The participants took a pre-assessment to check what they knew about this strategy.
- Readiness Assurance Test Two: The participants took the same test but in groups this time. They shared information and agreed on the correct answers.
- Share your Findings: The participants shared their answers and discussed differences.
- Summarize your Findings: The trainer provided a mini-presentation in which she summarized Why we need TBL, How we design a TBL class (Steps), and What TBL is.
- Practice your knowledge: The learners worked in groups to design lesson plans using TBL.

As for this study, the traditional sequence of activities in a TBL classroom was implemented; however, all the learning activities were RAR activities as mentioned above, and some experience activities inspired by FIRST-ADLX Framework's Domains and Principles were added; a pre-class icebreaker on a created WhatsApp group, a pre-opener to create a safe and engaging learning environment so that the learners get to know each other and feel comfortable, an opener to break the ice and increase the emotional readiness of the learners, an energizer in the middle to give the learners a break and increase motivation, and closure in which the learners' pre-questions were answered. The session was concluded with a virtual gift as a token of appreciation.

Three linking and summarizing activities were used after the second, third, and fourth RAR activities in which learners were invited to recall what they had learned in the session. As an after-session mission, the participants were invited to use TBL and design their lesson plans, share their designs with others, receive feedback, edit their designs, implement the lesson plan, and reflect on the whole journey. Figure 2 that follows visualizes the changes made to the traditional TBL sequence of activities.

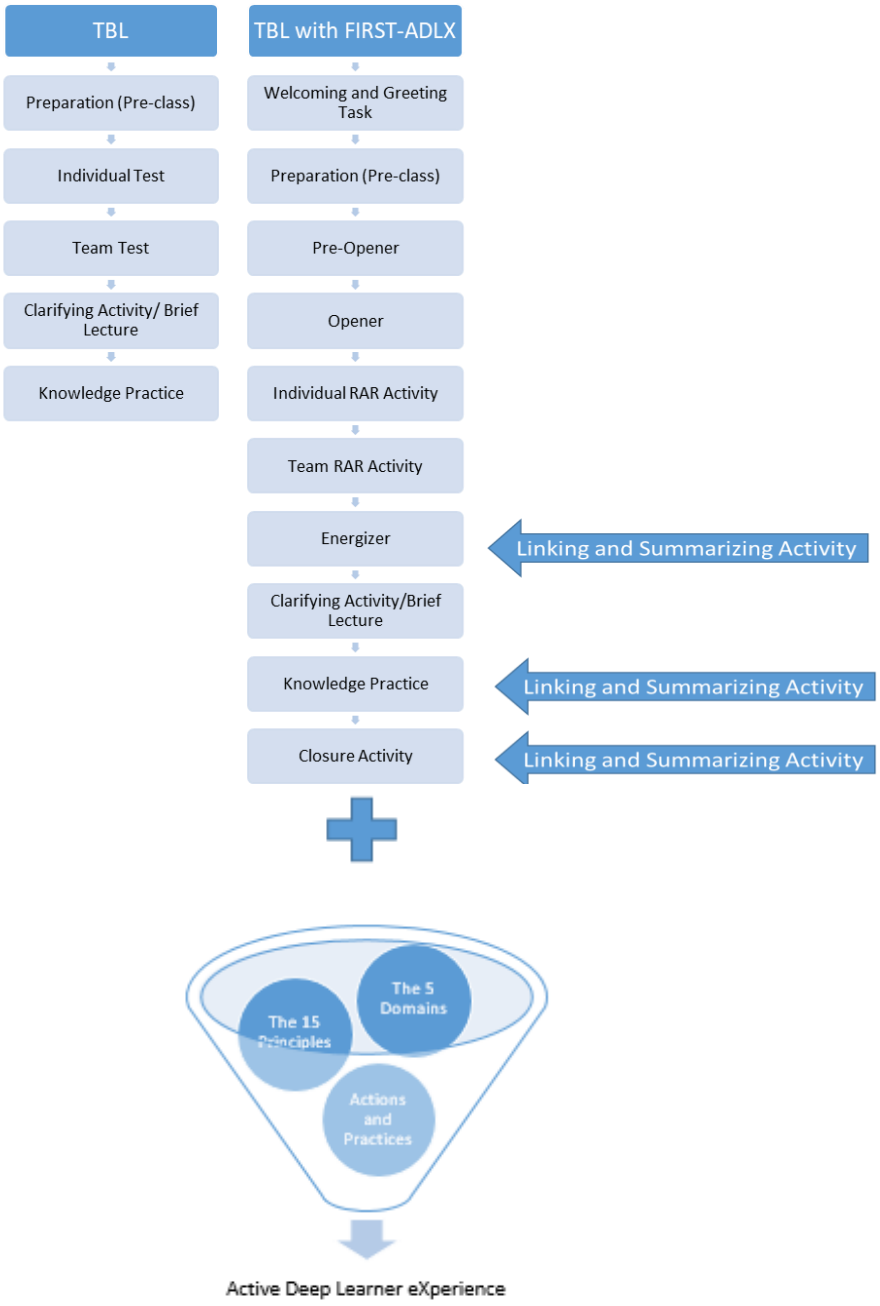

Figure 2. The changes made to the traditional TBL sequence of activities

1.1.5 Transforming Learning into Performance Domain

The three principles of this domain were actively applied throughout the session to ensure that transforming learning into performance occurs. To apply the principle of "Reflection on Reality", the learners were invited to reflect on their reality and think of future applications of what they had learnt whether in the reviewing actively stages or while working in groups to design lesson plans. They were also encouraged to share the challenges they might encounter while applying the target methodology and discuss possible ways to overcome these challenges.

As for the principle of "Practicing and Experiencing", learners were provided with two opportunities to apply the learned knowledge and skills. The first one was during the learning session when they collaborated in groups and designed a lesson plan using a blank template, and the second was an after-session mission in which they worked individually, designed their lesson plans following the same recommended steps, received positive constructive feedback from the facilitator, edited it accordingly, implemented it in their classrooms, reflected on it, and shared their reflections with other learners.

“Continuity and Follow-Up” was implemented as well. Learners were encouraged to discuss the challenges they encountered while facilitating their designs, set a plan to overcome the obstacles and implement the learned knowledge and skills, change the designs to address their student’s specific needs, evaluate the impact of what they had learned on their students, and reflect on the product and the process. They were also provided with a sample of a lesson plan designed using the target method (TBL) and a blank template so that they design their lesson plans following the same steps.

2. Literature Review

2.1 TBL Background

A learner-centered learning environment offers a range of interactive and complementary activities that allow individuals to pursue their learning interests and needs, explore various levels of complexity, and enhance their comprehension (Hannafin & Land, 1997; Land et. al, 2012). “Such environments facilitate student- or self-directed learning by enabling students to productively engage complex, open-ended problems that are aligned authentically with the practices, culture, or processes of a domain” (Land et. al, 2012, p. 3).

As for what a learner-centric approach is, it is “a style of teaching and learning that is also known as student-centered learning where the instructor focuses on the individual learner and each of his or her needs, instead of the curriculum as a whole, and where the teaching shifts from a focus on the teacher to that of the student” (Ryan, 2019, p.12).

Team-based learning (TBL) is an active learning method that fosters collaboration among learners. While it is learner-centered, it is also teacher-led (Koles et al.; Hrynchak & Batty, 2012). TBL adopts a flipped classroom strategy by assigning pre-class tasks for learners to complete before coming to class. During the class, learners take a readiness assurance test to assess their preparedness, and based on the results, they are divided into diverse teams to work on a set of real-life, authentic problems. The teams engage in peer tutoring, discussion, and editing of their responses to ensure optimal learning outcomes. TBL effectively develops the 21st-century skills of collaboration, communication, critical thinking, creativity, problem-solving, and decision-making. Additionally, TBL addresses the needs of every individual in large classes by dividing learners into smaller, more manageable teams (Michaelsen & Sweet, 2008; Hrynchak & Batty, 2012).

In the last two decades, educators in professional schools and college campuses have been increasingly using team-based learning TBL (Thompson et al., 2007; Haidet et. al, 2014). One of the reasons TBL has become popular is its efficient use of resources. It requires only one teacher to conduct multiple groups simultaneously and offers high levels of active learner participation, which are typically achieved only through small-group methods, as stated by (Haidet & Fecile, 2006; Haidet et. al, 2014).

With an underlying assumption that the traditional approach of simply presenting and covering course content in a lecture-based classroom may not effectively prepare learners for real-world problem-solving scenarios, TBL aims not just to cover course content but also to allow learners to apply their knowledge to solve problems. As a result, TBL aims to equip learners with both conceptual and procedural knowledge. While some class time is spent ensuring that learners have a solid understanding of the course material, the majority of the time is devoted to team assignments that emphasize the application of course concepts to address practical problems that learners may encounter later on (Michaelsen, & Sweet, 2008).

2.2 Learner eXperience

Pine and Gilmore (1998) suggest that an experience, as opposed to goods, commodities, or services, is a distinct offering that can provide customers with a lasting impression. They argue that experiences should actively engage customers in a personalized way and require skilled individuals who can individualize each event according to customer needs. Higher education should embrace the experience economy rather than offering commoditized information (Graham et.al, 2015). This concept serves as the inspiration for the "X" in the FIRST-ADLX Framework, where "X" represents the notion of eXperience. The term “eXperience” refers to an event that creates a lasting impression or has a significant impact on learners, resulting in positive changes in their thoughts, feelings, and behaviors.

FIRST-ADLX Framework places great importance on learner experience as a foundational concept, emphasizing the need to create a memorable and impactful experience to achieve effective transfer of learning. While Pine and Gilmore (1999) argue that experience is the result of emotional, physical, intellectual, or spiritual engagement, Davachi et al. (2010) find that emotions play an important role in learning and memory (Bahgat et al., 2018). The term "total student experience" was first introduced by Harvey et.al (1992) in the context of higher education, and Benckendorff et al. (2009) argue that it encompasses various aspects such as teaching, curriculum, learner activities, and mentoring, and is associated with learner engagement, satisfaction, and retention (Bahgat, et al., 2018). This concept serves as the inspiration for the "L" in FIRST-ADLX Framework, where "L" represents the notion of the learner. The framework

views the individual learner as a whole human in a whole learner eXperience whose emotions have a significant impact on both learning and memory (Davachi, et al., 2010; Bahgat, et al., 2018). There is a strong correlation between the emotional experience and resulting memories that can positively impact emotions and remain in the individual's memory for a long time, and therefore influence his behavior (Manthiou, et al. 2011; Bahgat, et. al. 2018).

2.3 Active & Deep Learning

Bonwell and Eison (1991) define Active Learning as instructional activities that engage learners in doing and thinking about what they are doing. They recommend that learners should not only listen but also read, write, discuss, and solve problems to be actively involved in the learning process. In line with this, the FIRST-ADLX Framework emphasizes active learning as a means of achieving transfer of learning, which Subedi (2004) notes as a critical criterion for transfer to occur. Furthermore, we contend that incorporating active learning strategies can lead to an improved learner experience, as demonstrated in a study by Georgiou and Sharma (2014) that highlights the positive impact of active learning techniques on learner experience (Bahgat, et al., 2018). This concept serves as the inspiration for the "A" in FIRST-ADLX Framework, where "A" represents the notion of the Active.

The concepts of deep and surface learning were developed by Marton and Säljö (1976). Deep learning involves seeking underlying meanings, relating new knowledge to prior experience, and analyzing and evaluating new knowledge (Biggs & Tang, 2010; Bahgat, et al., 2018). Learners who use this approach are more likely to retain, integrate, and transfer information, and they tend to have a more enjoyable learning experience compared to the surface learning approach (Laird et.al, 2006; Bahgat, et al., 2018). Additionally, the FIRST-ADLX Framework recognizes that an essential aspect of Deep Learning is the application of acquired knowledge and skills to real-world situations and behaviors, referred to as learning transfer. This encompasses not only the retention and deep understanding of information but also the development of the whole human character, including soft skills or 21st-century skills (Bahgat, et al., 2018). This perspective serves as the inspiration for the "D" in FIRST-ADLX Framework, where "D" represents the notion of the Deep.

2.4 Learning Frameworks

According to Gillis (2022), a framework is essentially a structure, either real or theoretical, that provides support and guidance for building something. This structure can then be expanded upon to create something more complex and useful. Applied to teaching and learning, frameworks are research-informed models for course design that integrate effective teaching practices. These models function as roadmaps, guiding teachers in aligning learning goals with classroom activities, fostering inclusive environments, and seamlessly integrating assessment into the learning process (Teaching and Learning Frameworks, 2021). By using these frameworks, teachers gain the tools to effectively plan, revise, and edit any course, syllabus, or lesson.

FIRST-ADLX Framework is a holistic framework that synthesizes different theories and models of learning and education. It is a novel framework for learner experience that consists of five domains: Focusing on the Learner (F), Interacting within Positive Group Dynamics (I), Reviewing Activities within the RAR Model (R), Sequencing (S), and Transforming Learning into Performance (T). Each domain comprises three principles, as shown in the table below, that are incorporated to create an Active Deep Learner eXperience.

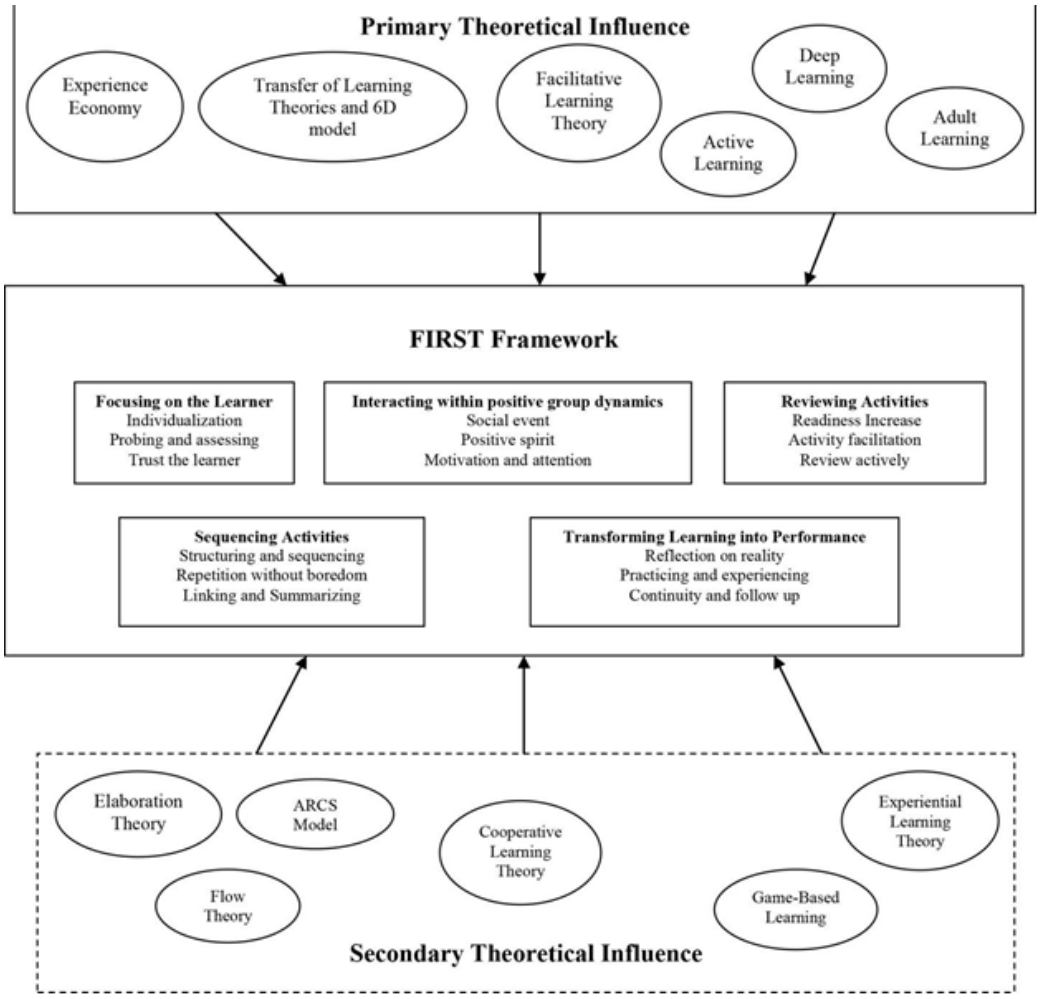

Figure 3. FIRST-ADLX Framework (Bahgat et al., 2018).

FIRST-ADLX Framework acknowledges teachers as facilitators of the learning process, whose one of their primary responsibilities is to achieve a balance between two key concepts: "pull" and "push." The facilitator pulls by offering learners different opportunities to share their experiences, knowledge, feelings, insights, and examples, enriching the learner experiences of all involved, including the facilitators themselves. Facilitators also push by providing new information, instructions, encouragement, or any other necessary support to help learners complete tasks or gain knowledge. This balance between "pulling" and "pushing" does not imply equality, but rather a deliberate approach to pulling when appropriate and pushing when needed (Bahgat, 2018, P.73).

In addition to the essential tasks of "pulling" and "pushing," the facilitator's role encompasses a wide range of responsibilities. This includes monitoring individual learners and taking into consideration their individual needs, creating a safe and supportive learning environment, ensuring positive interactions between learners, sequencing activities logically and smoothly, providing opportunities for reflection and the transfer of knowledge into practical applications, probing learners to elicit their thoughts and ideas, assessing learner progress, and offering positive and constructive feedback. The facilitator is responsible for looking at the entire learning journey and considering all the touchpoints that learners encounter, including people and things. This is essential for creating an Active Deep Learner eXperience that is tailored to each individual learner's needs throughout their journey (Bahgat, 2018, P.73).

FIRST-ADLX Framework places a strong emphasis on the individual learner, recognizing that each learner is a unique human on a personal learning journey. This means considering the learner's specific learning curve, needs, challenges, previous knowledge, feelings, and experiences. By observing each learner's behaviors during the journey and carefully considering them when designing sessions, the framework aims to create a customized and personalized learner experience for each individual. Learners are trusted contributors to the learner experience, and the framework is designed to treat them accordingly (Bahgat, et al., 2017).

2.5 Similarities and Differences between TBL and FIRST-ADLX Framework

Although the differences between "a learning method" and "a framework", as defined previously, seem to be clear, TBL and FIRST-ADLX Framework undoubtedly share a common perspective in the way they approach teaching and learning. They both prioritize the learner, view the teacher as a facilitator rather than a lecturer, encourage group work and different types of interaction, and stress the importance of positive, constructive feedback. Both approaches also focus on developing 21st-century skills such as collaboration, communication, problem-solving, decision-making, creativity, and critical thinking. However, two significant differences are crucial because they help to clarify the unique advantages of integrating TBL within the FIRST-ADLX Framework, and how this integration can enhance the teacher-learner experience.

The first difference is that TBL follows a set of stable steps to achieve the previously mentioned objectives. These steps include a pre-task, an IRAT (Individual Readiness Assurance Test), group formation based on the results of the test, a GRAT (Group Readiness Assurance Test), sharing and editing of responses, collaboration, mini-presentations by the teacher, and practice. Finally, learners share positive, constructive feedback with their peers (Michaelsen & Sweet, 2008).

On the other hand, FIRST-ADLX Framework does not offer a fixed sequence of steps to be followed, but rather emphasizes the smooth flow of various activities, both learning and experience activities. While the learning activities follow the RAR model with its three stages of **R**eadiness Increase, **A**ctivity Facilitation, and **R**eviewing active stages, the experience activities include pre-openers, openers, energizers, linking and summarizing activities, and closures. The facilitator divides the content into small units and organizes them in a coherent, logical, well-structured, and smooth sequence, taking into consideration the learners' emotional, physical, and mental state, as well as time management.

The second difference is that TBL focuses mainly on the mental readiness of the learners, with little attention given to their emotional and psychological readiness. While differentiation is established by creating diversified groups, the output is the same for different groups regardless of their preferences. In contrast, the FIRST-ADLX Framework fosters individualization and focuses on the learners' emotional, psychological, and mental readiness, providing diversified outputs that address the needs of every single individual.

In short, while TBL and FIRST-ADLX Framework share some common principles, FIRST-ADLX Framework takes a wider and deeper approach to learning and teaching. FIRST-ADLX Framework provides a holistic approach to learning that encompasses not only the acquisition of knowledge but also the development of essential skills and qualities that prepare individuals for success in a complex and rapidly changing world. The framework is flexible and can accommodate various learning methods, including TBL, as well as other approaches that emphasize active learning and learner-centric environments. TBL, in particular, aligns well with the framework's emphasis on collaboration, communication, critical thinking, and other non-cognitive skills, making it a potentially valuable tool for promoting deep learning and character development. However, it is important to note that TBL is just one example of a learning method that could be used within the FIRST-ADLX Framework. Consequently, the relationship between the two is that of synergy rather than of comparison.

3. Methodology

The study employed an auto-ethnography that aims to explore the facilitators and the teacher-learner's attitudes in a learning session where FIRST-ADLX Framework is used to moderate a TBL design and bridge any possible gaps ensuring an Active Deep Learner eXperience for every single learner. In other words, a learner experience was designed and facilitated to help teacher-learners learn what TBL is and how to use it, and the designer used FIRST-ADLX to embed and moderate TBL in the experience's design and facilitation. A qualitative approach is preferable when the research questions involve "what" and "what for" since such questions "cannot easily be answered with test scores, data, and statistical analyses. Rather it is more appropriate to study how humans interact and various social phenomena. They involve careful looking and listening to people in their natural settings," (Lichtman, 2012, p. 4).

Méndez (2013) explains an auto-ethnography is a useful qualitative research method used to analyze people's lives (p. 279) or as Ellis and Bochner (2000) define it, "...an autobiographical genre of writing that displays multiple layers of consciousness, connecting the personal to the cultural" (p. 739). In the field of education, the resultant self-analysis of auto-ethnography was found to "have purposeful implications for the preparation of teachers and school leaders (Starr, 2010, p. 1). Fifteen female schoolteachers from three different Arab countries participated in the study. They taught different school subjects including science, math, social sciences, and religion. Seven teach in Lebanon, five teach in the UAE, two teach in Egypt, and one teaches in Saudi Arabia. Fourteen out of fifteen teach in the private sector, and this unplanned disparity arose because while invitations were extended to a wider range of educators, only these fifteen individuals agreed to participate.

Having previously trained teachers on the implementation of team-based Learning (TBL) without moderating it with FIRST-ADLX Framework, a set of differences was observed. Such differences can address the previously mentioned gaps observed while designing and facilitating a learner-centric classroom without FIRST-ADLX Framework. These notable differences are summarized in the analysis.

3.1 Research Questions

3.1.1 Major Question

1. How effective is the use of FIRST-ADLX Framework in moderating a TBL classroom to improve learner engagement, overall satisfaction, knowledge retention, and ability to transform learning into performance?

3.1.2 Minor Questions

2. How effective is FIRST-ADLX Framework in improving engagement and facilitating communication and collaboration among team members (teacher-learners) during a team-based learning session?

3. How does FIRST-ADLX Framework impact the teams' overall satisfaction throughout the whole experience?

4. To what extent does FIRST-ADLX Framework support the achievement of the session's learning outcomes including the performance outcomes during a team-based learning session?

Learner Engagement Learner engagement is defined as the involvement of the learner's cognitive and emotional energy to successfully complete the learning activities (Astin, 1984; Schunk & Mullen, 2012; Halverson &Graham, 2019). It is described as "the dynamic state when learners are actively thinking about, focusing on, and enjoying their learning" (Mercer, 2019, p. 634). This study adopts the definition of "learner engagement" as the active physical, cognitive, and emotional involvement of the learners within synchronous activities, both learning and experience activities.

Learner Overall Satisfaction According to Lee (2011), learner satisfaction refers to the positive feelings or attitudes of learners towards learning activities and is influenced by various factors such as teachers, courses, learning environment, and personal factors. This study defines learner satisfaction as the positive attitude that learners hold towards the different touchpoints, they interact with during their learning journey, including the people they interact with such as the main facilitator, general coordinator, and other participants, and the materials and tools they use such as lesson plans, pre-tests, surveys, videos, etc.

Knowledge Retention Knowledge retention, as defined by Semb and Ellis (1994), means the remembering or retrieving of specific knowledge, processes, or skills that were learned earlier. It should be noted that while knowledge retention is the ability to recall information as it was learned, knowledge transfer involves recalling the information and applying it to new situations. Even though knowledge retention and knowledge transfer are not the same, retention must first take place for knowledge transfer to occur (Ramona & Alexandra, 2019).

Transforming Learning into Performance "Transforming Learning into Performance" is FIRST-ADLX Framework's fifth domain, and it deals with how to transfer learning into action, starting from within the classroom. It emphasizes the activities and actions that can be done to help the learners transfer learning into concrete practice and prepares them to apply the knowledge, skills, and attitudes gained in the real world (Bahgat et al., 2018). This paper investigates the occurrence of this "transforming" at the end of the journey.

3.2 Data Collection Tools and Method

The participants were informed about the main purpose of the session (data collection for research on the added value of the design and facilitation framework) and their consent was obtained. The researchers explained that the data would be used for research purposes and that participation would be mutually beneficial. They would have the opportunity to learn about TBL, while the researchers would gain insights into the effectiveness of the target framework.

Data was collected from all participants using various tools including a personal diary, qualitative survey, oral and written testimonials, personal observations and pieces of reflection, a tracking sheet to monitor pre- and post-session interactions, pre-tests, and consolidation lesson plans.

To comprehend the added value of FIRST-ADLX Framework, six different tools were used. The tools were meant to collect qualitative data, tackle the issue from various angles, and increase the results' credibility. A personal diary, feedback form, observation notes, the pre-and post-assessments, lesson plans, and reflective interactions were all designed with the utmost care to collect the required data and answer the research questions.

3.2.1 The Personal Diary and Observations

Since diaries are important thoughtful and reflective tools in language research (Nunan as cited in Suzuki, 2004), I started keeping my diary when I became interested in examining the effectiveness of FIRST-ADLX Framework. It was

kept daily and addressed mainly points that I thought were similar to some other concepts in the field of education. Some pieces of reflection on the domains and principles of FIRST-ADLX Framework were also included. In addition to this, all that had happened in the process of designing and facilitating the learning journey was documented, including the researcher's personal observations of the teacher-learner engagement and interaction within the learning session. The comparisons drawn in the diary between FIRST-ADLX Framework and other learner-centric approaches provided different qualitative data and helped explore the effectiveness and the added value of the framework.

3.2.2 The Feedback Form

"Feedback provides the practitioner and learner with evidence about current knowledge and skill development," (Education Victoria, n.d.). Consequently, learners were invited to rate the session in terms of engagement, addressing their needs, quality and quantity of knowledge offered, level of interaction, and the facilitator's facilitating skills. They were also invited to share an AHA moment or some new pieces of information learned through the session. In short, the feedback forms assessed the learners' level of engagement, satisfaction, and knowledge retention as one of the questions asked learners to rate their knowledge about TBL after the session.

3.2.3 The Pre-/Post- Tests and the Lesson Plans

To assess the participants' knowledge and their ability to apply learning, two more data collection methods were employed and they were distinct from course evaluation and grading.

Individual Readiness Assurance Test (IRAT): This pre-test was administered at the beginning of the session to estimate participants' baseline knowledge relevant to the TBL topic. This data provided a starting point for understanding their learning journey within the research context.

Lesson Plan Design Activity: Following the learning session, participants were presented with a blank lesson plan template and instructed to design their own lesson plans using the TBL approach they had just explored. This activity served two purposes:

Research: Analyzing these lesson plans allowed us to assess participants' knowledge retention and their ability to apply the newly acquired TBL skills (transforming learning into performance).

Formative Assessment: While not directly impacting grades, completing the lesson plans might have served as a self-reflection and learning consolidation activity for the participants.

It's important to note that participation in these activities was voluntary and did not influence course grades.

3.2.4 The Reflective Interactions

The learners' comments and reflections, whether on the feedback form, as we ended the session, or on the WhatsApp group after that helped me better understand their level of satisfaction and engagement. They even revealed an emerging theme of "Unintentional Assimilation of Some of FIRST-ADLX Framework's Principles" as learners used some of FIRST-ADLX Framework's principles and domains while describing the experience, without being aware of it. Figure 4 below reveals the various resources data was collected from.

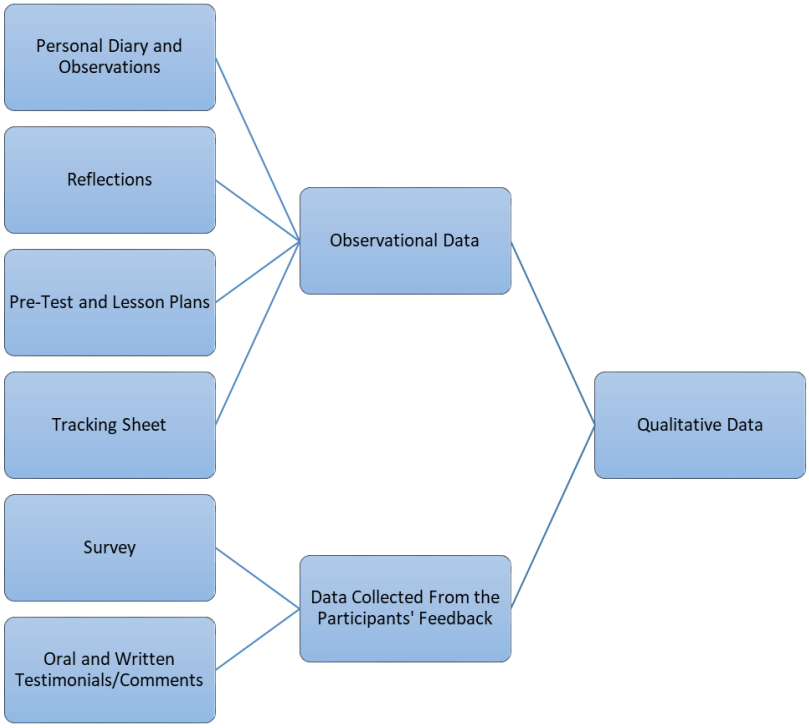

Figure 4. The Various Sources of Data Collection

4. Data Analysis, Results and Discussion

Qualitative data was extracted from the researcher's observations of the whole journey, learners' feedback, and reflections. It was then manually analyzed and categorized in response to the four main categories highlighted in the research questions: learners' engagement, satisfaction, knowledge retention, and transforming learning into performance.

An emerging theme, an unintentional assimilation of some of the framework's principles, appeared in the process. Figure 5 demonstrates the themes under which the collected data was organized.

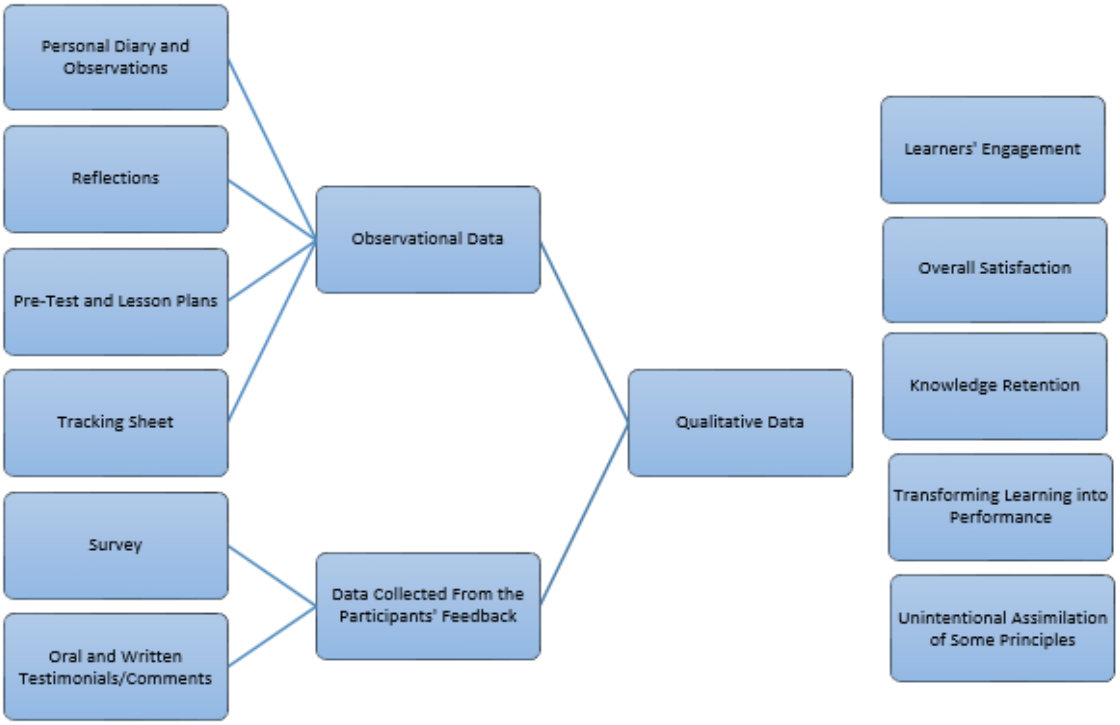

Figure 5. The themes under which the collected data was organized.

4.1 Teacher-Learners' Engagement, Communication and Collaboration

Throughout the learning journey, evidence of the teacher-learners' engagement was collected through personal diaries, observation of teacher-learners' interaction, and examining the teacher-learners' feedback and comments. The collected data showed that teacher-learners were greatly motivated and engaged when the domains and principles of FIRST-ADLX Framework were applied. The framework fostered a sense of intrinsic motivation and encouraged teacher-learners to perform whether individually or in groups.

In addition, they felt safe and had a sense of belonging to the teams they worked with. Applying the principles of Interacting within the Positive Group Dynamics Domain helped nurture a positive spirit, motivate teacher-learners, and create a social event out of the learning journey. This also helped the teacher-learners feel more comfortable and engaged. The icebreaker at the beginning, funny energizer in the middle, and thank-you gifts at the end enriched the learning experience, helped the teacher-learners relax and recharge, and increased the impact of the journey. Beyond the observations recorded in my personal diary, evidence of their engagement was also clear in their comments. One of the participants said, "I usually feel bored when my school asks me to attend a training session. I hate attending such sessions because the lecturer keeps talking, and I find nothing to do. This session was the best session I have ever attended. We were busy all the time, and I didn't feel bored at all." Another participant commented, "Time went fast. I was surprised when I realized that the session was over because we were fully engaged." "This is a chance not only to learn new approaches but to get to know some sisters who work in the same field and share ideas," added one of the participants. In brief, FIRST-ADLX Framework created an environment that fostered engagement, motivation, and a sense of belonging to a collaborative community of educators.

4.2 Overall Satisfaction Throughout the Whole Journey

Away from the participants' engagement within the synchronous activities, evidence of the teacher-learners' overall satisfaction, the positive attitude they held towards the various touch points they interacted with during their learning journey including different people and things, was collected through the qualitative surveys and the teacher-learners' oral and written testimonials, and feedback.

In their feedback, the teacher-learners frequently used terms like "unique interaction," "interesting trip that grabs attention," and "positive spirit" to describe their experience. On the Whatsapp group, teacher-learners used words like "fun," "motivating," "energetic," "beneficial," "helpful", "caring" and "applicable" to describe different touchpoints throughout the journey including the facilitator and the content. They also highlighted the unique approach in which the content was presented, which made them feel "trusted" and "valued" as contributors to the learning journey. The systematic and easy-to-follow "sequence" helped them navigate the material with ease and confidence, and the authenticity and practicality of the content were appreciated. Three participants described the content as "practical", "real", and "authentic", three expressed readiness to implement what they learned in the future, and two asked additional questions about possible future uses. In brief, the teacher-learner feedback suggests that the journey was successful in providing an engaging, effective, and impactful learning experience. The positive spirit and unique interaction fostered by the domains and principles of FIRST-ADLX Framework encouraged the teacher-learners to engage more actively and positively with the content. The clear and systematic sequence helped them follow the content with ease, while the practical and authentic nature of the content was acclaimed.

In conclusion, the combination of the teacher-learners' feedback, testimonials, and facilitators' observations reinforce the idea that FIRST-ADLX Framework was successful in promoting the learners' overall satisfaction.

4.3 Knowledge Retention and Transforming Learning into Performance

Evidence of the learners' knowledge retention was mainly collected from the comparison drawn between the results of their pre-tests and the lesson plans that were used as post-tests. The learners were provided with blank templates to fill out with the steps of the learned approach and designed a lesson plan following these steps. Despite that the lesson plans were mainly designed to assess their acquisition of a skill learning outcome, listing the steps helped assess their acquisition of the knowledge learning outcomes. The seven lesson plans submitted by the learners at the end of the journey reflected their acquisition of the knowledge and skill learning outcomes taking into consideration that the pre-test revealed that almost none of the learners was familiar with the content of the learning session. Furthermore, despite that measuring their ability to transform learning into performance in terms of facilitation was beyond the scope of this study, the seven lesson plans designed by the teachers after the learning session revealed their ability to transform learning into performance in terms of design as they successfully designed a lesson using TBL.

4.4 The Role of FIRST-ADLX Framework in Enhancing a TBL Learning Experience

Data collected mainly from observing the teacher-learner's behavior and interaction through the learning session shows the following:

- The three principles of *Focusing on the Learner Domain* fostered a sense of intrinsic motivation and encouraged the teacher-learners to perform.
- Applying the 3 principles of Interacting within the Positive Group Dynamics Domain nurtured the development of a safe learning environment, enhanced a sense of belonging to a community of educators who share similar interests, turned the learning session into an enjoyable social event, motivated the teacher-learners, and raised their attention.
- Reviewing *Activities within the RAR Domain* prepared the teacher-learners for the activities, facilitated their work, and helped them understand the connection between abstract knowledge and real-life settings. This realization was depicted in their feedback and comments on the WhatsApp group.
- The experience activities including the two icebreakers on WhatsApp at the beginning of the session, the funny energizer in the middle, the linking and summarizing activities, and the thank-you gift at the end incorporated elements of challenge, exploration, and discovery which helped create a memorable and engaging learner experience.
- Transforming *Learning into a Performance Domain* paved the way for a real transformation in the learners' performance. Reflecting on reality, training the participants to use the tools, practicing, and living the experience of being learners in such a learner experience encouraged seven out of 15 participants to implement this strategy directly after the trip and share their insights with others.

In short, FIRST-ADLX Framework was not only effective in enhancing a TBL experience, but it also provided the teacher-learners with a unique, memorable, active, deep, and immersive learner eXperience that they will probably remember for years to come.

4.5 Assimilation of Some of FIRST-ADLX Principles

Some evidence of unintentional assimilation of some of the FIRST-ADLX Framework principles was depicted in the learners' oral and written feedback. Learners noticed some of FIRST-ADLX Framework's actions and principles once they lived them. They used words that refer to the actions and principles of FIRST-ADLX Framework without being aware of that. Terms like "sequencing", "trusting the learners", "positive" environment, "interaction", "reality", "motivating", "positive feedback", "spirit", "engagement", "smooth flow", "authentic", and "practical" were quite repetitive.

In response to the main research question, the study shows that using FIRST-ADLX Framework to moderate a TBL environment increases teacher-learner engagement, enhances their overall satisfaction, and improves knowledge retention. It helps them design and facilitate an impactful Active Deep Learner eXperience.

4.6 Reflecting on the Learner eXperience with and without FIRST-ADLX

Table 1. Comparison of TBL with and without FIRST-ADLX Moderation

With FIRST-ADLX Framework	**Without FIRST ADLX Framework**	**Why? How?**
No participant was left behind and all the members were active in their groups	Some participants were left behind, and they didn't actively engage in group work.	Focusing on the Learner's Behavior with its three principles helped engage every single learner. Consequently, the FIRST ADLX Framework enhanced the level of engagement.
The participants weren't afraid of making mistakes or announcing their ignorance.	Some participants were too afraid to take the readiness tests or to share their answers.	The domain of "Interacting within Positive Group Dynamics" with its three principles and the "Readiness Increase" principle of the "Reviewing Activities" reduced anxiety and stress and helped create a safe learning environment where mistakes are opportunities to learn. Hence, the participants' overall satisfaction was improved.
The participants could repeat the steps more easily and faster.	Not all participants were able to repeat the steps.	The Sequencing Domain with its linking and summarizing principle and the "Reviewing Actively" principle of the third domain contributed to the smooth flow of activities and to the participant's ability to connect the newly learnt information. Thus, the participants' knowledge retention was increased.
Transforming learning into performance in terms of design was clearer.	Only a few participants were designing lesson plans while others were just watching.	Applying the domains and principles of FIRST-ADLX Framework's fifth domain (Transforming Learning into Performance) and the Reviewing Actively principle (The R Domain) helped the participants use the abstract knowledge in real-life settings.

5. Conclusion

In conclusion, while implementing a learner-centric approach is a step towards bridging the gap between what teachers

learn in their schools of education and what they experience in their classrooms, it may not be sufficient or may even feel artificial (Gordon, 2018). This highlights the need for a comprehensive framework that can provide teachers with a roadmap and concrete actions to bridge the gap between theory and practice, thereby creating high-quality learning environments. FIRST-ADLX Framework provides the teachers, who were learners in the students' shoes, on this journey with such a high-quality environment, and helps them design and facilitate Active Deep Learner eXperiences. FIRST-ADLX Framework with its five domains and fifteen principles promotes an Active Deep Learner eXperience which can leave a sustainable impact on the learners' attitude and behavior. By implementing the domains and principles of the FIRST-ADLX Framework, the facilitator and the teacher-learners can go far beyond what they could achieve with other learner-centric approaches if implemented alone.

5.1 List of Abbreviations

Abbreviation	Meaning
TBL	Team-Based Learning
ADLX	Active Deep Learner eXperience
FIRST	Focusing – Interacting – Reviewing – Sequencing - Transforming
TPD	Teacher Professional Development
RAR	Readiness Increase, Activity Facilitation, Reviewing Actively
IRAT	Individual Readiness Assurance Test
GRAT	Group Readiness Assurance Test

5.2 Limitation

Being an autoethnography, this study has the limitations of focusing on the self, the small number of participants, a short period of data collection, and a sole researcher interpreting the data. However, even though the study has limitations, sharing this experience with other teachers and facilitators who work in similar contexts or face similar challenges can provide significant value and pave the way for further research.

5.3 Future Research

The study explores the potential benefits of the FIRST-ADLX Framework for moderating other learner-centric approaches, specifically TBL. Further research can investigate the role of the FIRST-ADLX Framework in moderating other classes where different learner-centric approaches are implemented. In other words, research can also be conducted to investigate the effectiveness of the FIRST-ADLX Framework as a comprehensive framework to overcome the challenges educators face in a learner-centric environment. A greater number of learners can be addressed, and quantitative research can be implemented to increase the results' credibility and trustworthiness. Such further research along with an investigation of other possible factors of relevance, factors that might affect the three measured variables, can offer feasible, practical, and innovative solutions for the obstacles teachers are facing while trying to design and facilitate an Active Deep Learner eXperience.

Acknowledgments

Not applicable.

Authors contributions

Not applicable.

Funding

Not applicable.

Competing interests

Not applicable.

Informed consent

Obtained.

Ethics approval

The Publication Ethics Committee of the Redfame Publishing.

The journal's policies adhere to the Core Practices established by the Committee on Publication Ethics (COPE).

Provenance and peer review

Not commissioned; externally double-blind peer reviewed.

Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Data sharing statement

No additional data are available.

References

Astin, A. W. (1984). Student Involvement: A Developmental Theory for Higher Education. *Journal of College Student Development, 25*, 297-308.

Bahgat, M. M. (2018). *FIRST Framework, 5 Domains 15 Principles: Design & Facilitate Active Deep Learner eXperience (Volume 1) (Vol. 1).* Mohamed M. Bahgat.

Bahgat, M. M., Elsafty, A., & Shaarawy, A. (2020, December). Validating the Impact of FIRST Framework for Teachers Professional Development. In *Proceedings of the International Conference on Education* (Vol. 6, No. 2, pp. 36-50).

Bahgat, M., Elsafty, A., Shaarawy, A., & Said, T. (2018). FIRST Framework Design and Facilitate Active Deep Learner Experience. *Journal of Education and Training Studies, 6*(8), 123-138. https://doi.org/10.11114/jets.v6i8.3337

Bahgat, M., Elsafty, A., Sharawy, A., Elsamman, K., Samir, R., & Said, T. (2017, November). Facilitating Active Deep Learner eXperience, Using FIRST Framework Transforming Role of Teacher in the Classroom. In *Proc. 5th International Conference on Islamic Education* (ICIE 2017) (Vol. 21, p. 23).

Benckendorff, P., Ruhanen, L., & Scott, N. (2009). Deconstructing the student experience: A conceptual framework. *Journal of Hospitality and Tourism Management, 16*(1), 84-93. https://doi.org/10.1375/jhtm.16.1.84

Biggs, J., & Tang, C. (2010, February). Applying constructive alignment to outcomes-based teaching and learning. In *Training material for "quality teaching for learning in higher education" workshop for master trainers, Ministry of Higher Education, Kuala Lumpur* (Vol. 53, No. 9, pp. 23-25).

Bonwell, C. C., & Eison, J. A. (1991). *Active learning: Creating excitement in the classroom. 1991 ASHE-ERIC higher education reports.* ERIC Clearinghouse on Higher Education, The George Washington University, One Dupont Circle, Suite 630, Washington, DC 20036-1183.

Bonwell, C. C., & Eison, J. A. (1991). *Active learning: Creating excitement in the classroom. 1991 ASHE-ERIC higher education reports.* ERIC Clearinghouse on Higher Education, The George Washington University, One Dupont Circle, Suite 630, Washington, DC 20036-1183.

Burrows, A., Harvey, L., & Green, D. (1992). Concepts of quality in higher education: A review of the literature. *Quality in Higher Education Project.*

Davachi, L., Kiefer, T., Rock, D., & Rock, L. (2010). Learning that lasts through AGES: Maximizing the effectiveness of learning initiatives. *NeuroLeadership Journal, 3*, 53-63.

Education Victoria. (n.d.). Insight into teaching: Feedback. Retrieved April 10, 2023, from https://www.education.vic.gov.au/school/teachers/teachingresources/practice/Pages/insight-feedback.aspx

Ellis, C., & Bochner, A. (2000). Autoethnography, personal narrative, reflexivity: Researcher as subject.

Ellis, C., & Bochner, A. P. (2000). Autoethnography, personal narrative, reflexivity: Researcher as subject. In *N. K. Denzin & Y. S. Lincoln (Eds.), Handbook of Qualitative Research (pp. 733-768).* London: Sage.

Gillis, A. S. (2022). What is a framework and How Does it Work?-Definition from TechTarget. com. IoT Agenda.

Gordon, C. (2018). Beyond student-centered and teacher-centered pedagogy: Teaching and learning as guided participation. *Journal of Curriculum Studies, 50*(3), 340-357. https://doi.org/10.1080/00220272.2017.1419374

Graham, P., Dezuanni, M., Arthurs, A., & Hearn, G. (2015). A Dewyan experience economy for higher education. *Cultural Politics, 11*(1), 11-125. https://doi.org/10.1215/17432197-2842457

Haidet, P., & Fecile, M. L. (2006). Team-based learning: A promising strategy to foster active learning in cancer education. *Journal of Cancer Education, 21*(3), 125-128. [PubMed: 17371173]. https://doi.org/10.1207/s15430154jce2103_6

Haidet, P., Kubitz, K., & McCormack, W. T. (2014). Analysis of the team-based learning literature: TBL comes of age. *Journal on Excellence in College Teaching, 25*(3-4), 303.

Halverson, L. R., & Graham, C. R. (2019). Learner engagement in blended learning environments: A conceptual framework. *Online Learning, 23*(2), 145-178. https://doi.org/10.24059/olj.v23i2.1481

Hannafin, M. J., & Land, S. M. (1997). The foundations and assumptions of technology-enhanced student-centered learning environments. *Instructional Science, 25*, 167-202. https://doi.org/10.1023/A:1002997414652

Hrynchak, P., & Batty, H. (2012). The educational theory basis of team-based learning. *Medical Teacher, 34*(10), 796-801. https://doi.org/10.3109/0142159X.2012.687120

Koles, P., Corbett, A. M., Elased, K. M., Stolfi, A., Borges, N. J., & Parmelee, D. (2012). Does Participation in Team-Based Learning Affect Medical Students' Longer-Term Learning?

Land, S. M., Hannafin, M. J., & Oliver, K. (2012). Student-centered learning environments: Foundations, assumptions, and design. In *Theoretical Foundations of Learning Environments (pp. 3-25).* Routledge. https://doi.org/10.4324/9780203813799

Lee, Y. J. (2011). A study on the effect of teaching innovation on learning effectiveness with learning satisfaction as a mediator. *World Transactions on Engineering and Technology Education, 9*(2), 92-101.

Lichtman, M. (2012). *Qualitative research in education: A user's guide*. Sage publications.

Manthiou, E., Lee, S., & Liang, T. R. (2011). *"Measuring the Experience Economy and the Visitors Behavioral Consequences: An Empirical Study on Veishea Event",* 16th Graduate Students Research Conference, Houston, TX, USA.

Marton, F., & Säljö, R. (1976). On qualitative differences in learning: I—Outcome and process. *British journal of educational psychology, 46*(1), 4-11. https://doi.org/10.1111/j.2044-8279.1976.tb02980.x

Mascolo, M. F. (2009). Beyond student-centered and teacher-centered pedagogy: Teaching and learning as guided participation. *Pedagogy and the human sciences, 1*(1), 3-27.

Méndez, M. (2013). Autoethnography as a research method: Advantages, limitations and criticisms. *Colombian applied linguistics journal*, *15*(2), 279-287. https://doi.org/10.14483/udistrital.jour.calj.2013.2.a09

Mercer, S. (2019). Language learner engagement: Setting the scene. *Second Handbook of English Language Teaching,* 643-660. https://doi.org/10.1007/978-3-030-02899-2_40

Michaelsen, L. K., & Sweet, M. (2008). The essential elements of team-based learning. *New directions for teaching and learning, 2008*(116), 7-27. https://doi.org/10.1002/tl.330

Nelson Laird, T. F., Shoup, R., & Kuh, G. D. (2006, May). *Measuring deep approaches to learning using the National Survey of Student Engagement.* Association for Institutional Research Annual Forum.

Palsolé, S., & Awalt, C. (2008). Team-based learning in asynchronous online settings. *New Directions for Teaching and Learning, 2008*(116), 87-95. https://doi.org/10.1002/tl.336

Pine, B. J., & Gilmore, J. H. (1999). *The experience economy: Work is theatre &every business a stage.* Harvard Business Press.

Pine, J. P. II, & Gilmore, J. H. (1998). Welcome The experience economy. *Harvard Business Review, 76*(4), 97-105.

Pivec, C. R. J. (2011). Debriefing after Simulation: Guidelines for Faculty and Students. Master of Arts in Nursing Thesis. Paper 14.

Ramona, T., & Alexandra, B. (2019). Knowledge retention within small and mediumsized enterprises. *Studies in Business and Economics, 14*(3), 231-238. https://doi.org/10.2478/sbe-2019-0056

Ryan, P. (2019). How mentorship, critical thinking, and self-efficacy impact pre-service teachers and teacher educators in p-12 and higher education. In *Handbook of research on critical thinking strategies in pre-service learning environments* (pp. 37-54). IGI Global. https://doi.org/10.4018/978-1-5225-7823-9.ch003

Saunders, M., Lewis, P., & Thornhill, A. (2009). Research methods for business students. Pearson education.

Schunk, D. H., & Mullen, C. A. (2012). Self-efficacy as an engaged learner. In *Handbook of research on student engagement* (pp. 219-235). Boston, MA: Springer US. https://doi.org/10.1007/978-1-4614-2018-7_10

Semb, G. B., & Ellis, J. A. (1994). Knowledge taught in school: What is remembered? *Review of educational research, 64*(2), 253-286. https://doi.org/10.3102/00346543064002253

Starr, L. J. (2010). The use of autoethnography in educational research: Locating who we are in what we do. *Canadian Journal for New Scholars in Education/Revue canadienne des jeunes chercheures et chercheurs en éducation*, *3*(1).

Suzuki, R. (2004). Diaries as introspective research tools: From Ashton-Warner to blogs. *TESL-EJ, 8*(1).

Teaching and Learning Frameworks. (2021). Yale Poorvu Center for Teaching and Learning. https://poorvucenter.yale.edu/BackwardDesign

Thompson, B. M., Schneider, V. F., Haidet, P., Perkowski, L. C., Richards, B. F. (2007). Factors influencing implementation of team-based learning in health sciences education. *Academic Medicine, 82*(10 Suppl.), S53-S56. [PubMed: 17895691]. https://doi.org/10.1097/ACM.0b013e3181405f15

Weimer, M. (2013). *Learner-centered teaching: Five key changes to practice.* John Wiley & Sons.

Weimer, M. (2013. Two activities that influence the climate for learning. Faculty Focus, November 13. http://www.facultyfocus.com/articles/teaching-professor-blog/two-activities-that-influence-the-climate-for-learning/