MASTER Dissertation

Letters and foreign

Languages English

Sciences of the language

Submitted and defended by:

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Exploring the Influence of EFL learners' Personality Traits (Extroversion vs. Introversion) on their perceptions of Collaborative learning

The Case of third-year students of English at Biskra University.

Dissertation submitted to the Department of English as partial fulfillment of the Requirements for Master Degree in Sciences of Language

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Academic year: 2024/2025

Declaration

I declare that the work presented in this thesis under the title of "Exploring the Influence of EFL learners' Personality Traits (Extroversion vs. Introversion) on their perceptions of Collaborative learning: the case of third-year students at Biskra University. "Is my original work and has not been submitted previously in any university or institution for the award of a degree.

This study was conducted and completed at the University of Mohamed Khider of Biskra.

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Dedication

بسم الله الرحمن الرحيم

''وَمَا تَوْفِيقِي إِلَّا بِاللَّهِ، عَلَيْهِ تَوَكَّلْتُ وَإِلَيْهِ أُنِيب''
"And my success is only through Allah. Upon Him I have relied, and to Him I return." (Qur'an, 11:88)

*I would like to dedicate this thesis to my loving parents, whose continuous efforts, support, and encouragement made this work possible. To the two who gave me life, my mother, "**Belhachani Nassima",** and my father, **"Seliman"***, *who have done everything to help me achieve my dreams.*

*To my beloved brothers and sisters:" **Mohcen, Amel, Halima,** and little brother **Haroun"**.*

*To my uncle "**Anwar",** for being my guardian throughout my educational journey.*

*To my dear friends and classmates: "**Issraa", "Turkiya", "Hajer", "Hakima", "Soundous",** thank you for your endless support, love, and understanding.*

To everyone who believed in me and supported me throughout this journey.

To me, for holding on through the challenges, for believing in myself when it was hard, and for never giving up.

And finally, to you, the reader.

Thank you

Acknowledgements

All praise and gratitude are due to Allah, the Most Gracious, the Most Merciful, whose blessings, strength, and guidance have supported me throughout every step of this academic journey.

Over the course of writing this dissertation, I have been encouraged, guided, and supported by many people, to whom I would like to express my heartfelt gratitude.

First of all, I extend my sincere thanks to my supervisor, **Ms. Kenza MERGHMI,** for her continuous guidance, generous support, and invaluable advice. Her constructive feedback - and patient encouragement played a vital role in the development and completion of this work.

I am also deeply grateful to the distinguished board of examiners, **Prof. Saliha CHELLI** and **Dr. Moustafa AMRATE**, and **Dr. Boutheina AMRI CHENINI,** for their time, insightful comments, and valuable recommendations during the assessment of this work.

I would also like to sincerely thank all the teachers who kindly volunteered to answer my interviews. My gratitude goes to **Dr. Moustafa AMRATE, Dr. Barkat TURQUI, Dr. Hanane BUMAARAF, Mr. Abdelhak CHENINI, Dr. Lamjed EL HAMMEL, and Dr. Ilham TIGANE for** their kind cooperation and valuable assistance during the data collection process.

Special thanks are due to all the third-year students who participated in this research and generously provided their time, opinions, and insights.

Finally, I am deeply thankful to all my friends, colleagues, and everyone who contributed to this work in any way.

Abstract

This study investigates how EFL (English as a Foreign Language) learners' personality traits, specifically extroversion and introversion, influence their perceptions of collaborative learning (CL). Collaborative learning is considered as one of the effective teaching methods in the EFL context due to its numerous benefits in the language classroom. The study adopts a mixed-methods approach using two main tools: a semi-structured questionnaire administered to forty EFL students at Biskra University, consisting of a personality test, a mix between closed-ended and open-ended questions, and semi-structured interviews conducted with six EFL teachers at Biskra University. The findings revealed that personality traits influence students' preferences, behaviors, and challenges in collaborative learning settings. Teachers emphasized the importance of adapting collaborative strategies to enhance participation and engagement among both extroverted and introverted learners, such as assigning structured roles, balancing tasks, and grouping students with diverse personality traits. This research aims to understand extroverted and introverted learners' perceptions, preferences, and challenges when working in group for developing more inclusive and effective collaborative learning environments for EFL students with different personality traits.

Keywords: Collaborative learning, EFL learners, Extroversion, Introversion, Personality Traits.

List of Abbreviations and Acronyms

16 PF: 16 Personality Factor Model (Cattell's theory)

BFI: Big Five Inventory (e.g., BFI-44, BFI-20, BFI-10)

BFI-2:   Big Five Inventory-2

CL: Collaborative Learning

EEG: Electroencephalogram (referenced in Eysenck's biological research)

EFL: English as a Foreign Language

EPQ: Eysenck Personality Questionnaire

FFM: Five-Factor Model (also referred to as the Big Five Personality Traits Model)

GW: Group Work

MBTI: Myers-Briggs Type Indicator

OCEAN: Acronym for the Big Five traits: Openness, Conscientiousness, Extroversion, Agreeableness, Neuroticism

SILL: Strategy Inventory for Language Learning

TPS: Think-Pair-Share

ZPD: Zone of Proximal Development

List of Tables

List of Figures

CONTENTS

General Introduction

1. The Background of the Study

Collaborative learning (CL) is considered as one of the effective teaching methods in the EFL context. According to Gokhale (1995), collaborative learning involves students working in groups to accomplish shared academic goals while supporting and taking responsibility for one another's learning. This approach reduces dependence on traditional teacher-centered instruction by promoting active student participation and knowledge construction through social interaction. Ghodsi (2012) also emphasizes that CL fosters knowledge sharing, enhances critical thinking, and strengthens interpersonal skills. In higher education, McAdams and Pals (2006) observe that collaborative learning is often implemented through peer discussions, research projects, and group work, allowing students to develop both academic competence and social awareness.

Despite its numerous benefits, students may perceive collaborative learning differently depending on their personality traits, particularly the distinction between extroversion and introversion. Eysenck (1970) defines personality traits as enduring characteristics that influence behavior across various contexts. Jung (1921) describes extroverted individuals as outgoing and energized by social interaction, while introverted individuals tend to be reserved and gain energy from solitude and reflection. These personality differences can affect how students engage with collaborative tasks, especially in areas such as communication, participation, and group dynamics.

Jung further explains that introverted and extroverted learners adopt different approaches in group settings, which may influence their level of engagement and satisfaction with collaborative learning. Introverted learners often prefer structured and reflective environments, whereas extroverted learners are more comfortable with spontaneous social interaction. As a result, these variations can create imbalances in group participation and even misunderstandings among team members.

This raises important questions about whether learners with different personality traits experience collaborative learning in the same way, or if their perceptions, challenges, and strategies differ significantly. Moreover, teachers' awareness of these differences is essential in ensuring that collaborative activities are inclusive and supportive of all learners. Teacher perspectives can provide valuable insights into whether current methods effectively

accommodate both extroverted and introverted students, or whether new strategies are needed to align with these distinct personality traits.

In the context of Biskra University, there remains a lack of research on how personality traits, particularly introversion and extroversion, influence students' and teachers' perceptions of collaborative learning. Most existing studies in the Algerian EFL context have focused on participation patterns rather than learners' preferences, challenges, and collaborative strategies. Additionally, the role of teachers in adapting their methods to address these personality-related differences is rarely examined.

To address this gap, the present study explores how third-year EFL students at Biskra University perceive collaborative learning based on their personality traits, specifically extroversion and introversion. It also investigates how EFL teachers understand and respond to the influence of personality traits on student engagement in collaborative tasks. The goal is to offer practical insights for creating more inclusive and effective collaborative learning environments that support the needs of diverse learners and promote equal participation in EFL classrooms.

2. Statement of the Problem

In EFLT (English as a Foreign Language Teaching), teachers adopt various methods and techniques to enhance students' proficiency. Collaborative learning (CL) is one of the techniques that promote interaction, communication, and critical thinking. However, not all students benefit equally from collaborative learning, as personality traits, such as extroversion and introversion, may influence students' interaction, participation, and overall experience in group learning settings.

Myers and Myers (1995) argue that students with different personality traits engage in collaborative tasks in different ways, leading to inclined to in task preferences variations and challenges faced during group work. For instance, Blau and Barak (2012) found that extroverted students are naturally to participate actively in discussions and contribute more, compared to introverts who prefer a more structured and reflective approach. In contrast, Jacobs (2014) highlights that structured collaborative learning environments can provide more organized and productive space for those who require clearer guidance and defined roles, like introverts. In the same context, MacIntyre et al (1998) argue that personality traits, including extroversion and introversion, significantly influence students' readiness to participate in CL activities.

Despite the growing implementation of CL in EFL education, limited research has examined how these personality traits, particularly extroversion and introversion, shape their perceptions, preferences, and challenges in group work, particularly in Algerian universities. While previous studies have primarily focused on participation rates, fewer have explored students' preferences, experiences, and viewpoints during collaborative learning. According to Johnson and Johnson (1999), collaborative learning is most effective when individual differences among learners are taken into consideration. in addition to that, there is also limited research on whether teachers recognize these differences to adapt effective CL strategies accordingly to those extroverted and introverted EFL learners.

To address this gap, this study explores the influence of third-year EFL students personality traits specially those who are extrovert and introvert at Biskra University perceive on their Collaborative learning and also how teachers understand this influence on student' interaction, behaviors in the learning settings. The study aimed to provide practical insights for fostering inclusive CL environments that accommodate different learning preferences to enhance student collaboration

3.Aims of the Study

This study aims to explore how the personality traits of EFL learners, specifically extroversion and introversion affect their perceptions of collaborative learning. **First,** the study examines the differences in task preferences between introverted and extroverted students in collaborative learning settings, investigating whether their distinct personality traits shape their approach to group activities and engagement. **Second**, it seeks to explore the challenges that both introverted and extroverted third-year students face in collaborative learning environments, highlighting how their personality traits influence their participation and interaction. **Third**, it aims to identify EFL teachers' perspectives on collaborative learning, exploring their insights and the strategies they suggest for enhancing the effectiveness of collaborative learning for both extroverted and introverted students.

4. Research Questions

This study seeks to answer the following questions:

Main Research Question

How do introversion and extroversion affect third-year EFL students' participation in collaborative learning, as seen by students and their teachers at Biskra University?

Sub-Questions

RQ1: What are the differences in task preferences between introverted and extroverted third year EFL students in collaborative learning settings?

RQ2: What are the challenges that both introverted and extroverted third-year students face in collaborative learning environments?

RQ3: What strategies do EFL teachers at Biskra University suggest to make collaborative learning more effective for introverted and extroverted EFL learners?

5. Research Methodology

This study used a mixed-methods approach in order to explore the influence of third-year EFL students' personality traits (Extroversion vs. Introversion) on their perceptions of collaborative learning. A mixed method approach was suitable for this study as it allowed to gain a deep understanding of how personality traits affect students' perceptions, preferences, and challenges in collaborative learning by combining both quantitative and qualitative data. Additionally, it allowed for more exploration of how the EFL teachers view and perceive this effect in the educational settings. This research employs a descriptive research design as it seeks to identify and analyze the perceptions, challenges, and experiences of EFL students at Biskra University regarding collaborative learning. And also knowing teachers' perceptions regarding this matter of what their suggested strategies they adopt to meet the needs of both learners' personalities during group work.

By using this approach, the research aims to gain rich and detailed data that enhances the understanding of how collaborative learning can be tailored to support both extroverted and introverted students in collaborative learning settings.

6. Population and Sampling Techniques

The target population for this study includes third-year EFL students and EFL teachers of English at the Mohamed Kheider University of Biskra. Third-year students were specifically chosen as sample to this study because they use group work in their studies such as group discussions, research projects, and peer-based learning. adding to that they have

already been introduced to learning styles and personality traits in their studies, which allows them to recognize their own learning preferences. This makes them a suitable sample for examining how personality traits (extroversion vs. introversion) influence their perceptions of collaborative learning.

Additionally, EFL teachers at Biskra University are included in this study to gain insights their perceptions in collaborative learning and how they adapt their teaching methods to accommodate these differences. These teachers are not required to have taught third-year students specifically, as the study focuses on their general experiences with collaborative learning.

This study employs 40 students were randomly selected from the entire third-year section, ensuring that each student has an equal chance to participate. This approach guarantees a balanced sample of both introverted and extroverted students, which identified through a personality assessment. For teachers, a purposive sampling used to select EFL teachers with experience in collaborative learning.

7. Data collection tools

To investigate how EFL learners' personality traits affect their collaborative learning experiences, this study will utilize two major data collection methods:

- **Questionnaire :**

 To explore the influence of personality traits of extroverted and introverted learners' perceptions on collaborative learning and identify their challenges and preferences,40 third-year students at Biskra University took their answers through a semi-structured questionnaire. The questionnaire is divided into two parts. The first part is a personality test including the Big Five Inventory-2 (BFI-2), specifically the extraversion scale, developed by Soto and John (2017). The use of this test not only helps us in identifying who is an extrovert and introvert from the third year, but also provides a more comprehensive assessment of both introversion and extroversion. Moreover, the BFI-2 is widely recognized and well-suited for academic research.

The second part focuses on the student perceptions, preferences, and challenges of traits of both extroverted and introverted students toward collaborative learning. In this part, the questions chosen according to the research objectives, the questionnaire include a mix

between closed-ended and open-ended questions, enabling the collection of quantitative data regarding students' experiences, preferences, and challenges in collaborative learning environments.

- **Teachers' Interview**

A semi-structured interview was conducted with six EFL teachers from the Department of English at Biskra University. The interview aims to gain insights into teachers' perceptions of collaborative learning and how they believe students' personality traits affect their participation and engagement in group activities. The interviews also explore the specific teaching strategies employed to support both extroverted and introverted learners.

By using these data collection tools, this study gives detailed information on how students and teachers view collaborative learning in EFL environments.

8. Significance of the Study

This study is significant as it investigates how personality traits, specifically extroversion and introversion, affect EFL learners' perceptions of collaborative learning, a subject that has not been widely investigated in Algerian higher education. By looking at how introverted and extroverted third-year EFL students at Biskra University participate in group work, this research offers important insights into the perceptions, preferences, and challenges in student participation and collaboration in collaborative learning settings. Understanding these differences is essential as it will enhance classroom inclusivity and ensure that collaborative learning methods meet the diverse needs of the learners. Moreover, this study adds to EFL teaching pedagogy as it sheds light on how teachers also perceive collaboration and how personality traits influence student engagement. Since teachers play a crucial role in creating group activities, understanding personality-related learning preferences can help them develop more effective and inclusive teaching strategies. This study contributes to applied linguistics and educational psychology by exploring the link between personality traits and collaborative learning. As it can benefit curriculum developers, teacher trainers, and policymakers, providing practical suggestions for creating more inclusive collaborative learning environments for EFL learners.

9. Structure of the dissertation

This dissertation is structured into three main chapters. The first two chapters are the theoretical part, while the third is devoted to the field of work. The first Chapter provides an overview of the significance of collaborative learning as a common teaching technique in the context of English as a Foreign Language (EFL). This chapter highlights its key definitions and how it differs from cooperative learning. It also outlines major strategies, principles, and skills, as well as their impact on language acquisition. The second Chapter focuses on personality traits, particularly extroversion and introversion. This chapter examines how these two personalities impact students' perceptions and experiences of collaborative learning. Finally, the third chapter emphasizes analyzing the results that are tackled while collecting the qualitative data, then summarizing and discussing the key findings of the research.

Chapter one
Collaborative learning

1.1 Introduction

This chapter explores the collaborative learning technique as a teaching method in modern education, particularly in the context of language learning, which offers opportunities for students to acquire, understand, and learn more effectively, since it is useful and helpful, the collaborative technique is widely used in classrooms all over the world nowadays

The chapter begins with a historical overview of collaborative learning. Then, discussing its definitions to distinguish it from cooperative learning. Moreover, this chapter presents several collaborative learning strategies, including Think-Pair-Share, the Jigsaw method, and Numbered Heads Together, discussing its types, principles. Additionally, it sheds light on the essential collaborative skills, characteristics of effective collaborative learning environments, its impact on language acquisition, and the challenges and limitations students encounter when implementing this approach. Understanding these elements will offer valuable insights into how collaborative learning can be effectively utilized in EFL classrooms to enhance student engagement and language proficiency.

1.2 Historical Overview of Collaborative Learning

The idea of collaborative learning first emerged in the 1950s and 1960s in the medical field, where medical educators observed that students who work together have better performance than those working alone (Brufflee, 1995). As a result, this discovery caused a shift in various academic disciplines. Leading to adaptations of the new strategies of group-based learning to emphasize the role of group interaction in enhancing learning, knowledge retention and problem-solving skills.

Between the 1940s and 1960s, all educational practices and methods focused on individual competition, where students were literally assessed through their ability to perform far from their peers. whereas this model was criticized later for avoiding critical thinking and the social connection. (Slavin, 1996).

As a result, researchers search another methods that foster the students' interaction and cooperation. One of them Collaborative learning, which originated from the constructivist theory, particularly that proposed by Jean Piaget (1950) and Vygotsky (1978). Piaget argues that social interaction is important as it enable peers to question, refine their ideas and fostering cognitive growth. In contrast, Vygotsky (1978) introduces the concept of the zone of proximal development (ZPD), which argues that students achieve a deeper level of understanding when they collaborate with their peers or educators who offer them support and guidance.

By the 1980s, collaborative learning had gained wider recognition in educational research. Scholars like Johnson and Johnson (1989) emphasize important principles that become fundamental in collaborative learning approaches, such as positive interdependence, face-to-face interaction, and individual responsibility. They found that students who engaged in group work achieved higher comprehension, improved their problem-solving capacities, and increased motivation compared to those engaged in competitive or solitary learning settings. (Johnson & Johnson, 1989).

In the 21st century, collaborative learning has been transformed by the rise of digital technology and online learning like the virtual classrooms, digital platforms, and global networking tools, which facilitated students' participation in group work, collaborative projects, and problem-solving activities beyond the conventional classroom environments (Stahl, Koschmann & Suthers, 2006).

Nowadays, collaborative learning is considered as an effective and used teaching strategy, particularly in the English as a foreign language (EFL) context, where students' interaction plays a significant role in fostering language acquisition, enhancing critical thinking, and developing communicative competence (Dillenbourg, 1999).

1.3 What is CL?

Collaborative learning (CL) has widely spread in educational research. The best way to understand this method is through the definition of this concept as defined by different scholars in various ways.

One of the most famous definitions of collaborative learning is offered by Slavin (1996) he defines collaborative learning as an instructional approach where students engage in small groups to support one another in their academic learning. It means that CL is a structured instructional approach where students work together and help each other understand the academic content by explaining it to each other.

Collaborative learning can be described as a teaching method that focuses on the learning process, allow learners whether in groups of three to five or more to engage with course material. This approach facilitates various learning activities, including studying course content, problem-solving, and learning from real-world work experiences. It encompasses different types of communication: synchronous and asynchronous, traditional

face-to-face interactions, and online mediums, allowing for collaborative efforts or individual tasks (Dillenbourg, 1999).

According to Zarei and Gilani (2012), CL is "a situation in which two or more people are trying to learn something alone together and solve a problem "(p. 5). The active involvement of learners in real settings is essential to address their problems which they face.

Another definition by Johnson, Johnson & Holubec of collaborative learning (CL) as "the instructional use of small groups so that students work together to maximize their own and each other's learning" (1998, p. 5), which means that learning is a shared journey, not just a solitary activity. It requires students to interact, discuss, and support each other. The goal is for everyone to get involved and befit from that experience.

Collaborative learning is widely acknowledged as a highly effective teaching approach. As noted by Swan et al. (2006, p. 46), it entails" collaborative learning is a teaching strategy that includes a small group of learners working together to develop the educational experience to the maximum extent possible." This indicates that student collaboration enhances understanding and engagement, leading to a more interactive and meaningful learning process.

From these definitions, we can say that collaborative learning can be described as a teaching method that focuses on student's interaction, teamwork, and a shared commitment to learning. In this approach, small groups of students collaborate to solve problems, finish assignments, or reach shared objectives while actively engaging with the material they are studying.

1.4 Collaborative learning versus cooperative learning

In today's educational environment, group learning has emerged as a vital approach to enhancing student engagement and promoting critical thinking skills. Moreover, it is important to note that not all methods of group-based learning function in the same way. Among the various utilized approaches are collaborative learning and cooperative learning. these two strategies have notable differences in their structure, learner roles, and the educational outcomes they produce. For this matter, we will clarify the differences between collaborative and cooperative learning by presenting the author's definitions of the two terms. Bruffee (1995) identifies the differences between the two concepts. He argues that :

First, collaborative and cooperative learning was developed originally for educating people of different ages, experiences, and levels of mastery of the craft of independence. Second, when using one method or the other method, teachers tend to make different assumptions about the nature and authority of knowledge

 (p.12)

While some scholars use cooperative and collaborative learning interchangeably, others highlight its difference between the two. Ventimiglia (as cited in Lee & Zhao, 2015) indicates that in collaborative learning, group members take the initiative to establish their own goals and resources. In contrast, in cooperative learning, it is the teacher who designs, develops, and organizes activities for the students.

Bruffee sees collaborative and cooperative learning as two unique methodologies within group learning. He says that collaboration enhances students' learning independently and the construction of knowledge through interactions among peers, whereas cooperative learning follows a more structured approach, characterized by guidance and help from teachers. This distinction leads to the varying impacts of each approach, whether on students' learning experiences or levels of engagement.

He also said that this distinction highlights that cooperative learning is commonly applied in primary and secondary education, where structured tasks and teacher-led activities guide students in acquiring knowledge. In contrast, collaborative learning is important in higher education settings. Bruffee (1989) stated that:

"Collaborative learning creates conditions in which students can negotiate the boundaries between the knowledge communities they belong to and the one that the professor belongs to." (p. 144)

This emphasises how collaborative learning puts students in dynamic and knowledgeable communities which encourage them to negotiate and share their ideas.

According to Markuills & Strang (2002) and Ruengtam (2012), key distinctions exist between collaborative learning and cooperative learning through table below who outlines these differences:

Table 1.1

The difference between collaborative learning and cooperative learning (Markulis and Strang 2002; Ruengtam 2012)

Feature	Collaborative Learning (Markuills & Strang,2002)	Cooperative Learning (Ruentgam,2012)
Structure	Less structured; flexible and open-ended with a focus on joint knowledge creation	Structured; The teacher assigns roles and responsibilities for specific tasks
Teacher's Role	facilitator who guides the group provides resources and encourages reflection	instructor directs takes and ensures active participation from all members
Student Interaction	Emphasis on open-ended discussion and shared problems so living activities	Focus on structured tasks with assigned roles and responsibilities
Group dynamics	Promotes shared responsibilities in the learning process and mutual dialogue	Encourages interdependence, where each student plays a role in achieving the group's goals
Focus	Encourages critical thinking, negotiation of meaning and exploration	Focuses on task completion, ensuring that all students contribute to the shared goal
Goal	To jointly construct knowledge and deepen understanding through active dialogue	To accomplish a specific outcome or tasks, often assessed both individually and as a group
Learning outcome	The outcome is often more flexible and process-oriented, with an emphasis on reflection	The outcome is outcome-driven, with specific goals set for the group to achieve

	Typically involves peer assessments, group reflection And self-assessments	Uses both group and individual assessment to ensure equal contribution from each student
Assessment		

From this table, we understand that collaborative learning and cooperative learning have notable differences between them, which both use group work but vary significantly in their frameworks, student interactions, and the role of the teacher. Collaborative learning is characterized by its flexibility and promotes open-ended discussions, allowing students to share responsibilities and collectively construct knowledge, while cooperative learning is more structured, with the teacher assigning specific roles and tasks to ensure that every student participates. In CL, the teacher acts as a facilitator, guiding discussions and offering resources, while in cooperative learning, the teacher adopts a more authoritative role, focusing on the efficient completion of tasks. Additionally, the assessment strategies differ; collaborative learning includes peer evaluations and self-reflection, whereas cooperative learning often includes both individual and group assessments. These differences highlight that CL encourages deeper critical thinking and shared responsibility, making it particularly effective for higher learning. In contrast, cooperative learning promotes task completion and equal participation, which can be advantageous in more structured educational environments. Educators can select the most appropriate approach based on their students' needs and the specific learning goals they aim to achieve.

Despite their differences, both approaches play a vital role in boosting student engagement and fostering critical thinking. Therefore, educators must select the most appropriate method tailored to the specific needs of their learners and the educational environment (Bruffee, 1995, p. 87).

1.5 Collaborative learning strategies

They are techniques that encourage students to work together, share ideas, and construct knowledge collectively. These strategies make learning more interactive and engaging. These strategies are as follows:

1.5.1 Think-Pair-Share (TPS)

In this technique, students follow three steps: First, students think individually and reflect on the question or topic given by their teacher. Then, they discuss the question with

their partner. Finally, share their responses with their class. This technique improves the quality of discussions, allowing every student to learn through both reflection and verbal expression (Srinivas 2009).

1.5.2 Three-Step Interview

This technique involves students working in pairs to engage in structured interviews and changing roles to ensure equal participation. In the first step, one student interviews the other, asking questions about a given topic. Then, they switch roles, allowing the interviewee to become the interviewer. Finally, in the third step, each pair shares their partner's responses with a larger group or the class. Srinivas stated that this strategy can serve as an icebreaker or a team-building activity, and it can also be utilized to exchange information like hypotheses or responses to a movie or article. (2009,)

1.5.3 Simply Jigsaw

Strategy is a fun way for students to learn by teaching each other. The teacher divides the assignment or topic into four sections, and each student in the learning team chooses to become an "expert" on one of those sections. The expert teams collaborate to fully understand their part and figure out the best ways to teach it to others. After that, all the experts come back together in their original learning teams to share what they've learned with the other members.

1.5.4 Numbered Heads Together

It is a fun way to get students working as a team. Each student in a group is assigned a number. The teacher poses a question, and the group collaborates to discuss it. After that, the teacher randomly selects a number, and the student with that number responds on behalf of the group.

1.6 Collaborative Learning Skills

Researchers highlighted essential collaborative learning skills, including communication, problem-solving, and social interaction.

1.6.1 Communication Skills

Effective CL requires strong communication. Johnson and Johnson (1999) said that collaboration fosters speaking, listening, and negotiation skills, which are crucial for language learning. Those engaged in structured group activities demonstrate comprehension and verbal skills compared to those who work independently.

1.6.2 Problem Solving and Critical Thinking Skills

CL promotes critical thinking and problem-solving abilities. Slavin (1995) notes that working together on problems enhances higher-order thinking skills such as analysis, evaluation, and reasoning. Group tasks encourage students to address misunderstandings and refine their cognitive strategies, as well as strengthen their problem-solving capabilities. Kirschner, Sweller, and Clark (2006) also highlight that effective collaboration needs meaningful cognitive engagement, which further develops these skills.

1.6.3 Interpersonal and Social Skills

Effective collaboration needs strong interpersonal skills, including empathy, cooperation, and adaptability. Dillenbourg (1999) characterizes collaborative learning as a social process that deepens understanding. Meanwhile, Mercer (2000) posits that dialogue and mutual trust are fundamental to successful collaboration, particularly in EFL contexts.

1.6.4 Self-Regulation and Accountability

Self-regulation plays a crucial role in teamwork. According to Graham and Mislevy (2011), learners who manage themselves effectively set goals, develop their progress, and think about how well they are doing. Pintrich and De Groot (1990) point out that self-regulated learners are more inclined to take charge and show motivation.

1.6.5 Conflict Resolution and Negotiation Skills

In collaborative learning, students need to negotiate in a positive way. Bruffee (1999) highlights the importance of building agreement and engaging in respectful negotiations to keep the productivity of the group. These abilities enable students to manage differences effectively and contribute to successful teamwork.

To sum up, skills for collaborative learning are essential for effective language learning in EFL environments.

1.7 Characteristics Of Collaborative Learning

In their book, Learning Together and Alone: Cooperative, Competitive, and Individualistic Learning, Johnson and Johnson (1999) highlight several key aspects that are crucial for effective collaborative learning.

1.7.1 Positive Interdependence

Positive interdependence is the foundation of collaborative learning, where the success of the group depends on each member's contributions (Johnson & Johnson, 1999). Each student is given a specific role that aligns with their strengths, making it clear that the group cannot succeed without everyone's active participation. This shared responsibility fosters a supportive atmosphere where cooperation is essential for achieving the group's objectives. By depending on one another, learners engage in a more profound learning experience that focuses on reaching collective goals (Slavin, 1995).

1.7.2 Individual Accountability

Individual accountability means every group member is responsible for their own learning, even in a collaborative environment (Johnson & Johnson, 1999). While students collaborate, it is vital that each person can show their understanding and complete tasks on their own after the group work. This accountability helps to avoid situations where some members might take advantage of others, ensuring that all students acquire important skills and knowledge from the experience (Kagan, 1994).

1.7.3 Face-To-Face Promotive Interaction

Johnson and Johnson (1999) describe face-to-face promotive interaction as the direct engagement among group members, which is crucial for fostering mutual support and achieving group objectives. In a collaborative environment, students need to participate in discussions, solve problems together, and provide peer tutoring to effectively utilize their resources and skills. This interaction enables students to clarify their understanding and enhance their learning.

1.7.4 Interpersonal and Small Group Skills

Effective collaborative learning requires students to either possess or cultivate interpersonal and small group skills, including proficient communication, leadership abilities, and conflict resolution techniques (Johnson & Johnson, 1999). In the absence of these competencies, even the most meticulously designed group activities may not succeed. Educators must ensure that students acquire the essential social and teamwork skills required for effective group collaboration. Training in these domains enables students to navigate group

dynamics and address any challenges that may emerge, thereby fostering a constructive learning atmosphere (Gokhale, 1995).

1.7.5 Group Processing

According to Johnson and Johnson (1999), group processing entails reflecting on the group's performance and assessing which elements of the group's interactions were successful and which aspects require enhancement. This stage prompts students to critically evaluate the group's operations and explore strategies for improving collaboration in future activities. Consistent group processing is vital for refining group dynamics and enhancing overall performance, making it a crucial element of sustained collaborative initiatives (Slavin, 1995).

1.8 Benefits of collaborative learning

Many studies tackle the huge benefits of Collaborative learning in the educational context and its influence on academic success, critical thinking, communication abilities, motivation, and social skills.

1.8.1 Improving Academic Performance

One of the most significant advantages of CL is its positive effect on students' academic results. Research indicates that students who participate in collaborative learning often achieve a deeper understanding and better grasp of information compared to those who study alone. Slavin (2014) notes that "collaborative learning boosts student achievement by promoting deeper engagement with the material and allowing for peer explanations" (p. 787). When students collaborate, they help each other clarify concepts, address knowledge gaps, and reinforce their learning through discussions. Johnson and Johnson (2009) found that cooperative learning leads to better academic outcomes than competitive or individual learning settings, as students are more likely to remain engaged and committed to solving problems. Additionally, Vygotsky's (1978) Zone of Proximal Development (ZPD) theory suggests that students learn most effectively when they receive support from more knowledgeable peers, which enhances their understanding of complex concepts.

1.8.2 Enhancing Critical Thinking and Problem-Solving Abilities

CL enables students to engage in higher-level thinking skills. When they discuss, debate, and defend their viewpoints, they strengthen their critical thinking abilities. Webb

(2009) emphasizes that "collaborative discussions motivate students to build arguments and critically assess different perspectives."p.12 Gokhale (1995),found that students involved in collaborative learning activities are outperformed to those who studied individually on problem-solving tasks. Additionally, Kirschner, Sweller, and Clark (2006) point out that working together helps distribute the cognitive load, allowing students to handle complex problems more efficiently.

1.8.3 Enhancing Communication and Social Skills

CL gives students the chance to practice and improve their communication skills, which are vital for success in both school and future careers. Through engaging in discussions, negotiating meanings, and giving constructive feedback, students develop verbal and nonverbal communication skills. Oakley et al. (2004) suggest that "collaborative learning boosts interpersonal communication by requiring students to actively listen, clearly express their ideas, and positively resolve conflicts" (p. 15). Furthermore, research indicates that students involved in collaborative learning are more likely to acquire teamwork skills, which are in demand in the job market (Dillenbourg, 1999).

1.8.4 Boosting Student Motivation and Engagement

When students collaborate, they tend to be more engaged and motivated in their learning. Deci and Ryan (1985) found that students who learned in collaborative environments reported greater motivation and confidence in their abilities compared to those in traditional lecture formats. Similarly, Johnson and Johnson (2009) note that "collaborative learning environments encourage positive interdependence, where students feel accountable not just for their own learning but also for the success of their peers" (p. 368). The self accountability can help reduce anxiety, particularly in challenging subjects, and boost students' willingness to participate and get involved.

1.8.5 Encouraging Social and Emotional Growth

CL plays a vital role in enhancing social and emotional skills. Group work enables students to form connections, build trust, and improve their emotional intelligence. Tseng (2008) points out that "collaborative learning experiences help students manage relationships, handle conflicts, and develop resilience" (p. 110). These abilities are useful in preparing students for real-life scenarios where teamwork and flexibility are essential.

Slavin (2014) states, "When done right, collaborative learning not only boosts academic results but also equips students for lifelong learning and teamwork" (p. 789). Given these benefits, teachers should aim to incorporate CL methods into their lessons while addressing any challenges to ensure their success.

1.9 The Importance of collaborative learning in language acquisition

Many researchers have found the significant effect of collaborative learning in the process of language acquisition. Swain (1985) stated that "collaborative dialogue is where language learning occurs" (p. 248), as learners recognize gaps in their understanding and enhance their language skills through interaction. In a similar vein, Vygotsky (1978) mentions that learning is a socially constructed phenomenon, indicating that "students develop higher mental functions through interaction with more capable peers" (p. 86). These studies illustrate that collaboration is a vital element in language learning through:

1.9.1 Cognitive and Linguistic Growth Through Interaction

Collaborative learning significantly contributes to cognitive and linguistic growth by facilitating interaction. Vygotsky (1978) noted that "learning occurs in the Zone of Proximal Development, where students advance with the support of peers or teachers" (p. 90). Long's (1983) Interaction Hypothesis also supports this notion, suggesting that learners enhance their vocabulary and grammatical precision through the negotiation of meaning. This idea is supported by Lantolf and Thorne (2006), who discovered that peer collaboration enables learners to internalize new language structures, resulting in improved fluency.

1.9.2 Active Language Use and Error Correction

Swain's (1985) Output Hypothesis highlights that "language production is as crucial as language input" in the acquisition process. Within collaborative environments, students participate in meaningful dialogues where they identify linguistic errors and refine their language use. Storch (2002) found that learners collaborating in pairs produced a greater volume of language and engaged in mutual error correction, which enhanced their grammatical proficiency. Likewise, Foster (1998) demonstrated that peer interaction "creates opportunities for refining language use, leading to more effective communication skills" (p. 11).

1.9.3 Enhancing Motivation and Engagement

Collaborative learning significantly boosts motivation among students. Guay, Ratelle, and Chanal (2008) posited that "students engaged in cooperative tasks demonstrate elevated levels of intrinsic motivation" (p. 240). Interacting with peers alleviates anxiety and fosters self-assurance, encouraging learners to participate more actively. Research indicates that when students feel accountable for their learning, they are more inclined to take risks and engage in language use (Johnson & Johnson, 1999, p. 67).

1.9.4 Developing Peer Feedback and Critical Thinking Skills

Collaboration also enhances critical thinking and problem-solving abilities. Gass and Mackey (2007) noted that "learners who receive peer feedback cultivate stronger self-monitoring skills and improve their linguistic output more effectively" (p. 183). Storch (2007) emphasized the importance of peer feedback in enhancing both accuracy and fluency, as it prompts students to reflect on their errors and learn to rectify them. Evidence suggests that students involved in discussion-based learning enhance their capacity to analyze, evaluate, and apply language in practical situations.

10. Challenges and limitations of collaborative learning

Despite its numerous benefits, Collaborative learning faces various challenges that can affect how it works. among these challenges are:

1.10.1 Unequal participation among students

One major challenge in CL is Unequal participation, which can lead to an unfair distribution of work among group members. Johnson and Johnson (2009) argue that "group members often exhibit unequal levels of participation, which can lead to frustration and an imbalanced workload" (p. 112). This situation occurs when some students take leadership roles, actively engaging in discussions and completing tasks, while others stay passive or disengaged. Similary, Slavin (2014) notes that this imbalance is especially noticeable in mixed-ability groups, where high-achieving students often take on more responsibility for the group's success, while less motivated or less confident students may contribute very little.

1.10.2 Difficulty in assessing individual contributions

Another important limitation of CL is the difficulty in assessing individual contributions during group work. In traditional educational environments, assessments are designed to measure individual performance based on specific learning goals. Whereas, in Collaborative learning, students collaborate to achieve a common result, making it difficult for teachers to assess the learning performance of each student.Oakley et al. (2004) suggest that assessing collaborative learning requires a careful balance between evaluating the overall group outcome and acknowledging individual contributions to maintain fairness. Webb (2009) supports this idea by stating that "evaluation in collaborative learning environments should take into account both the group outcome and individual responsibility to ensure a fair assessment" (p. 47).

1.10.3 Personality Differences And Group Conflicts

Group conflicts and Personality differences can also be a challenge regarding the effectiveness of collaborative learning. the diverse thoughts and points of view are beneficial in group work; however, it can sometimes lead to disagreements, miscommunication, or conflicts that affect group progress. For example, Cain (2012) points out that "introverted students often feel overwhelmed in collaborative environments where verbal participation is prioritized" (p. 173). This indicates that some students, especially those who prefer to learn alone or are naturally shy, may find it hard to participate in group discussions. Also, students with different learning styles and work habits can create tension within the group. Dillenbourg (1999) notes that "successful collaboration relies on the ability of group members to navigate interpersonal differences and work towards a shared objective" (p. 21). Without guidance from educators, these conflicts can lead to disengagement, decreased motivation in collaborative learning.

1.10.4 Time Constraints and Curriculum Demands

Time limitations and curriculum requirements play a significant role in collaborative learning (CL). According to Kirschner, Sweller, and Clark (2006), "collaborative learning can be time-consuming and may not always align with curriculum requirements, making it challenging to integrate into structured syllabi" (p. 83). . Additionally, time constraints can complicate students' ability to organize group meetings, especially in higher education, where schedules vary widely. Finkel and Monk (1983) point out that "time management is a key

factor in the success of collaborative learning, as inadequate time allocation can reduce its effectiveness" (p. 56) Educators need to plan their lessons carefully to ensure that collaborative tasks do not consume too much instructional time while still providing students with valuable learning experiences.

1.10.5 Technological and Accessibility Barriers

While digital platforms can enhance collaboration, they can also lead to differences in student engagement due to varying levels of access to technology. Means et al. (2010) discovered that students from lower-income backgrounds often face challenges with online collaboration because of unreliable internet connections and limited access to digital devices. These obstacles can lead to unequal participation, as students with fewer resources may struggle to contribute effectively. Additionally, technical problems like poor connection, unfamiliarity with digital tools can further impact their collaboration. Sangin et al. (2010) stress that "students who lack access to technology may find it difficult to engage fully in collaborative learning experiences."p.92

These challenges emphasize the importance of institutions ensuring that all students have equal access to technology and proper training, so everyone can engage fully in group activities. As Tseng (2008) points out, "successful collaboration depends on well-designed group dynamics that encourage equal participation and foster a positive learning environment" (p. 107).

1.11 Conclusion

Collaborative learning is a highly effective educational method that greatly improves the learning experience, especially in EFL (English as a Foreign Language) settings. This approach encourages students to interact with each other, which helps develop their communication skills, critical thinking, and problem-solving abilities in a group setting. It creates a supportive and engaging environment where students can exchange knowledge and experiences, leading to a deeper understanding of the material.

This chapter has demonstrated that collaborative learning goes beyond just group tasks; it is a nuanced process that relies on meaningful interactions among participants. The effectiveness of these activities hinges on proper teacher guidance and the establishment of a learning atmosphere that promotes active involvement from every student.

While collaborative learning brings many advantages, such as increased engagement and better interpersonal skills, teachers must also recognize the potential challenges students may encounter, like limited interaction or difficulties in sharing ideas. Therefore, educators

must design collaborative activities thoughtfully, considering the varied needs of their students to maximize the benefits

From the discussions in this chapter, it is clear that collaborative learning is a valuable strategy for fostering active learning and enhancing both social and cognitive skills. With appropriate guidance and careful planning, collaborative learning can serve as a foundation for creating an inclusive and effective educational environment for all learners.

Chapter Two:
Personality Traits

2.1 Introduction

In this chapter, we discussed how personality traits influence students' participation, transactivity, and interaction in the collaborative learning environment with particular emphasis on the traits of extroversion and introversion. In order to understand whether being an introvert or extrovert impacts how they perceive collaborative learning in EFL classes.

We begin with defining personality traits and their significance in education from various theoretical perspectives, then move to the key theories and models of personality, including the Big Five Personality Traits, the Myers–Briggs Type Indicator (MBTI), and Eysenck's Three-Factor Model. Then, we will spotlight the core of our study on the traits of extraversion and introversion through highlighting their characteristics, differences, and their impact on language learning acquisition.

Furthermore, the chapter will examine how these personality traits affect their learning styles and collaborative behavior, without forgetting to shed light on the challenges and advantages faced by both extroverted and introverted learners.

2.1 Conceptualization Of Personality Traits

2.2.1 Definition Of Personality

Personality has been a subject of interest across various disciplines, including psychology, sociology, and education. It is widely understood as the combination of characteristics that make individuals unique, such as traits, needs, and motivation. which often influence how people think and behave in different internal or external situations.

Starting with the general definition which has been provided by the Merriam-Webster Dictionary, personality is "the complex of characteristics that distinguishes an individual, nation, or a group; especially the totality of an individual's behavioral and emotional characteristics" (Personality, Merriam-Webster, n.d.). This definition highlights the uniqueness of individuals through their feelings and emotional expressions.

In the field of psychology, numerous scholars have offered various definitions based on their theoretical perspectives. Most of these definitions focus on internal consistency, emotional patterns, and behavioral tendencies. One of the earliest definitions was provided by Allport (1937), who defined personality as "the dynamic organization within the individual of those psychophysical systems that determine his characteristic behavior and thought" (p. 48). This definition underscores the inner systems that create consistent patterns and behaviors of individuals. Similarly, Eysenck (1994), as cited in Alwisol, defines personality as "the more or less stable and enduring organization of a person's character,

temperament, intellect, and physique, which determines his unique adjustment to the environment" (p. 2), from this view we see the scholar how gave attention of both stability and adaptability in personality structure.

Another definition from Larsen and Buss (2005). They offered a comprehensive definition of personality as "a set of psychological mechanisms within the individual that are organized and relatively enduring, and that influence individual interactions with, and adaptation to, the intrapsychic, physical, and social environments" (p. 4). According to Larsen and Buss, personality influences individuals' social interactions by influencing the types of people they meet, the environments they engage in, and the emotional responses they experience.

Pervin and John (1997) view that personality as the features a person possesses that account for consistent patterns of behavior (p. 4) Pervin (1996) further expended on by referring to personality as "the complex of organized cognitions, affects, and behaviors that give direction and patterns in the person's life" (p. 414) here Previn gives a strong emphasize on the internal organization and consistency of the individuals.

Roberts et al. (2009) reinforce this view; they view personality from other angles as "individual differences in characteristic patterns of thought, emotion, and behaviour" (p. 68)

From these varied definitions, it became clear that personality plays a crucial role in shaping an individual's behaviour, emotional, and interpersonal functioning. It significantly influences how people perceive and interact with the world around them.

2.2.2 Definition Of Traits

Traits represent a fundamental dimension of personality that reflects consistent patterns in individuals' thoughts, emotions, and behaviors across various situations. According to Kreitler and Kreitler, traits are not momentary reactions, but enduring psychological characteristics that shape how people feel, act, and think, contributing to long-term personality structure (Kreitler & Kreitler, 1990). These qualities are fundamental in understanding personality because they account for the stable differences observed among individuals.

Shekhan explains that traits are habitual, emotional, behavioral, and cognitive tendencies, which offer insight into how personality expresses itself in everyday life as: "habitual patterns of emotions, actions, and thoughts… which are relatively stable over time and differ across individuals… and influence behavior" (Shekhan, n.d., pp. 330). Similarly, Eysenck highlights that traits form the foundation of our individuality; they cover the stable

and lasting characteristics that make each person distinct and unique from others (Eysenck, 1991). This idea reinforces the notion that traits are what make our personalities unique. Pervin also defines traits as "enduring dispositions that influence the behavior across different contexts" (Pervin, 2003, p. 45), suggesting that traits help predict how individuals are likely to behave in various situations. On the same scale, Pervin and Carvone (2010) explain that traits function as consistent behavioral patterns that help identify our personality differences across individuals and contexts, further solidifying their role in shaping personality.

2.2.3 Definition Of Personality Traits

Although traits serve as the essential components of human behavior, personality traits extend beyond this foundation; they influence an individual's stable patterns of thoughts, emotions, and reactions to their social environment (McCrae & Costa, 1997, p. 509). Various scholars have provided a range of definitions to capture the concept of personality traits.

To begin with, McCrae and Costa (1997), in their study *"Personality Trait Structure as a Human Universal,"* define personality traits as "dimensions of individual differences in tendencies to show consistent patterns of thoughts, feelings, and actions" (p. 509). This means that personality traits are quantifiable features that affect how people behave.

Moreover, Goldberg (1993), in his work, views personality traits as "the basic tendencies that underlie consistent patterns of behaviour across various contexts" (p. 27). This viewpoint emphasises that traits serve as the core of a person's personality, shaping how people interact with each other and make decisions in various areas of life.

In addition to these definitions, Winter (2003) argues that traits are not just personal qualities, but are also visible and noticeable to others. He defines traits as "the public, observable element of personality" (p. 115). He adds that they play a crucial role in forming first impressions and affect how people communicate with one another. His definition aligns closely with the lexical hypothesis in personality psychology, which proposes that language has developed to mirror the essential differences in human personalities.

To sum up this , Allport and Odbert (1936) carried out a thorough investigation of the English language and found that there are 18,000 words dedicated to describing personality traits. This large quantity emphasises how embedded personality descriptions are in our communication. Later, McCrae and Costa (1985) supported this idea by claiming that these descriptive words are not arbitrary; instead, they reflect consistent and lasting patterns of individual differences.

These definitions collectively underscore that personality traits are not only enduring psychological patterns (McAdams & Olson, 2010), but are also deeply embedded in how humans perceive, describe, and navigate social interactions (Winter, 2003). Without them, we cannot interact in the social environment.

2.3. Models And Theories Of Personality Traits

Personality traits have been studied through a variety of psychological theories and models. These models aim to explain how these traits are formed, how they are organized, and how they influence human behavior. Among these traits are extroversion, agreeableness, openness, etc. They also help us understand individual differences and why people may behave differently in the same situation, especially in areas such as education, psychology, and organizational settings.

The Big Five Personality Traits, Eysenck's Three-Factor Model, and the Myers-Briggs Type Indicator (MBTI) are among the most well-known models. These trait-based models simplify the complexity of human personality and provide useful frameworks for understanding behavior across different contexts.   George Box (1976) stated that "all models are wrong, but some are useful". George Box means by this quote is that no model or theory can perfectly represent the real world, even they are not completely accurate, they can still be helpful tools for understanding, predicting, or explaining certain aspects of human life more clearly than if we had no model at all.

In our study, we have chosen to focus on the three main models—**the Big Five Model, Eysenck's Three-Factor Model, and the MBTI**—while briefly mentioning other models that share similar purposes, like Cattell's **16 Personality Factor Model, Zuckerman's Alternative Five Model, and Mischel's Cognitive-Affective Personality System**. Below is a brief overview of these key theories and models.

2.2.1 The Big Five Personality Traits Model (Five-Factor Model - FFM)

The Big Five personality traits theory is one of the most widely accepted frameworks for understanding individual personalities. Johnson (2014) argues that the model was developed to explore the connection between personality and academic behavior. It was first introduced by D. W. Fiske in 1949 as part of psychological trait theory (Digman, 1990, as cited in Jonasson & Wallmon, 2023), and later refined by various researchers such as

Norman (1967), Smith (1967), Goldberg (1981), and McCrae and Costa (1987) (Verywell Mind, n.d.). One of the most popular and current versions of the model was proposed by Digman in 1990. He wrote about the emergence of Big Five and categorized the model into five broad dimensions, grouped under the acronym "OCEAN": Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism (Digman, 1990, as cited in Jonasson & Wallmon, 2023). He describes them as follows

2.2.1.1 Openness to Experience

Openness to experience is related to being curious, imaginative, and interested in new ideas or experiences. Highly open people often score higher on creativity and intelligence tests and are more likely to work in scientific or artistic fields (Soto, 2018). They also tend to hold liberal social and political beliefs and often consider themselves spiritual rather than religious.

2.2.1.2 Conscientiousness

Conscientiousness plays a crucial role in predicting both academic and professional success. Highly conscientious students tend to achieve higher grades; they perform better across a variety of occupations and careers. Moreover, conscientious individuals often live longer because they engage in healthy behaviors and avoid risky activities such as smoking and substance abuse (Soto, 2018). They also tend to hold conservative political attitudes and religious beliefs.

2.2.1.3 Extraversion

Soto (2018) notes that extraversion is a strong predictor of social outcomes. Extroverts are typically more socially connected, often having a greater number of friends and romantic partners. They are perceived by others as having higher social status and tend to thrive in social or enterprising careers. Additionally, extraverts are more inclined to take leadership roles within their communities. Psychologically, they experience higher levels of subjective well-being than introverts, particularly due to their more frequent and intense positive emotions.

2.2.1.4 Agreeableness

Agreeableness is related to being kind, helpful, and getting along well with others. People who score high in agreeableness are generally more well-liked by others. They tend to enjoy more stable and fulfilling close relationships. They are often drawn to social careers, participate in volunteer work, adhere to religious practices, and frequently take on leadership

positions in their communities. Additionally, agreeable individuals are less likely to engage in criminal activities (Soto,2018)

2.2.1.5 Neuroticism

Soto (2018) highlights that neuroticism is negatively associated with subjective well-being and psychological health. Individuals scoring high in neuroticism typically report lower satisfaction with life in general and within specific domains like work and relationships. They are also more vulnerable to mental health conditions such as anxiety and mood disorders.

To evaluate the personality traits of learners, the Big Five Inventory (BFI) is frequently used, especially the BFI-44 developed by John, Donahue, and Kentle in 1991. This tool includes 44 self-assessment items rated on a Likert scale, allowing researchers to assess individual differences in these traits with a high level of reliability and validity. For studies with limited time or large samples, shorter versions like the BFI-20 and BFI-10 are also available. The BFI-20 offers a good balance between length and accuracy, while the BFI-10 is quicker but less reliable (Rammstedt & John, 2007). These traits are considered relatively stable over time and universal across cultures.

Figure 2.1 *The five-factor model by Anna Vital, Adioma (2018)*
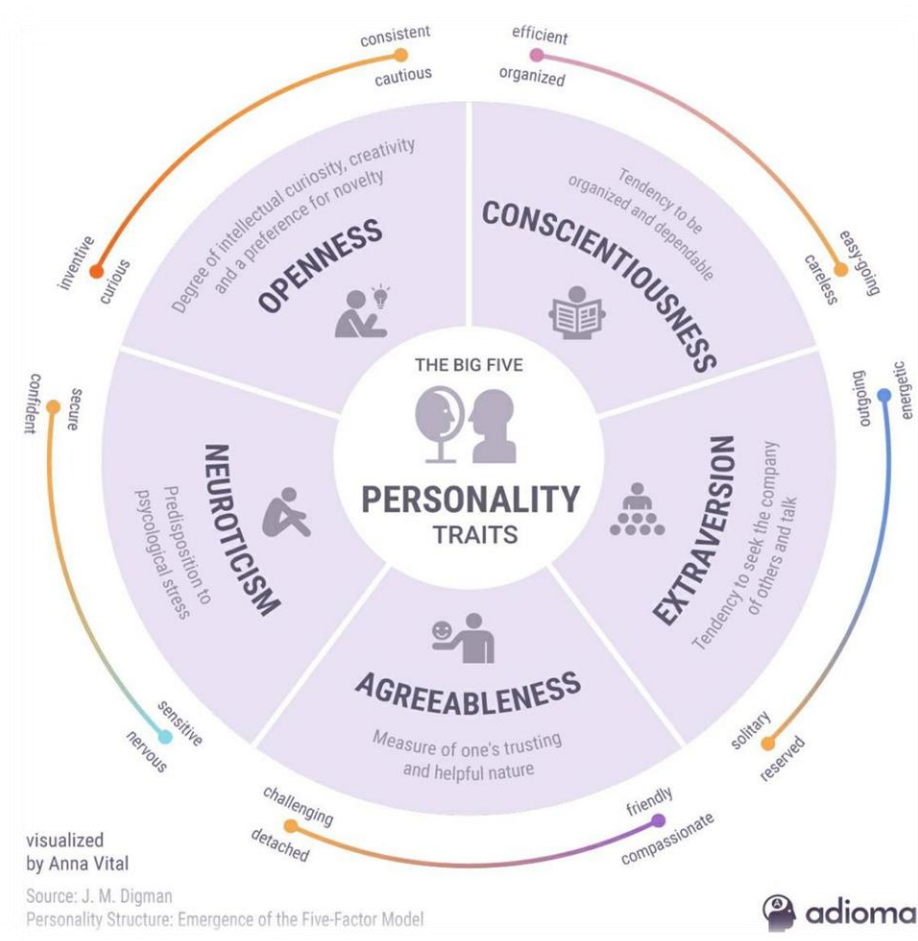
2.2.2 Eysenck's Three-Factor Model

Eysenck's Three Factor Model of personality is a significant framework in the field of personality psychology. Eysenck (1967) proposed that personality can be understood through three key dimensions: **Extraversion**, **Neuroticism**, and **Psychoticism**, each associated with specific biological systems in the brain.

First, Extraversion is characterised by sociability and a tendency to be outgoing. According to Eysenck and Eysenck (1975), extroverts experience lower cortical arousal, prompting them to seek more stimulation compared to introverts. This idea is also confirmed by the EEG research, which indicates that "extraverts show lower resting alpha power, indicating reduced brain arousal" (Stelmack & Houlihan, 1995). On the other hand, Neuroticism measures the person's sensitivity to stress and emotional challenges. Eysenck (1981) noted that individuals with high neuroticism have a more reactive limbic system, leading to heightened emotional reactions. The last dimension is psychoticism, which

encompasses traits like impulsivity and aggression, and is thought to be linked to dopamine levels and hormonal regulation (Francis, 1996)

These personality traits are assessed using the Eysenck Personality Questionnaire (EPQ), which positions individuals along each trait dimension (Barrett et al., 1998). Neuroimaging studies have further supported these connections; for example, Kumari et al. (2004) found that neuroticism correlates with increased activity in the amygdala and prefrontal areas.

2.2.3 Meyers-Briggs Type Indicator (MBTI):

The Myers-Briggs Type Indicator (MBTI) was created by Isabel Briggs Myers and Katharine Cook Briggs during World War II to classify personality differences based on Carl Jung's psychological types theory (Myers & Briggs, 1995). Jung (1921/1971) suggested that people have inherent cognitive functions that shape how they view the world and make their own choices. The MBTI builds this concept by presenting four pairs of opposing traits: Extraversion (E) vs. Introversion (I), Sensing (S) vs. Intuition (N), Thinking (T) vs. Feeling (F), and Judging (J) vs. Perceiving (P) (Briggs Myers et al., 1998).

Over the years, the MBTI has been refined, especially with help from the Educational Testing Service (ETS), which played a key role in standardizing the tool (Furnham, 2017).

Robinson et al. (2018) note that the MBTI is consistent with Jung's cognitive function model, highlighting that people develop unique ways of thinking, perceiving, and making decisions. Additionally, Capraro and Capraro (2002) mention that "the MBTI has undergone numerous adaptations and revisions to improve its reliability and usefulness in various fields" (p. 578). This tool is widely used in education, business, and psychological studies, providing individuals with valuable insights into their personality traits (McCrae & Costa, 1989). Today, it is one of the most popular personality assessment tools globally (Pittenger, 2005)

2.2.4 Other theories of personality traits:

It is also important to remember that there are other theories and frameworks that help us enhance our understanding of personality and individual differences. For instance, **Cattell's 16 Personality Factor Model.** Cattell's (16 PF) model is considered one of the most notable works in psychology, it was developed by the psychologist Raymond Cattell in 1949. He aimed to create a standardized framework for understanding personality traits by analyzing everyday language and identifying key adjectives that describe human behavior by evaluating sixteen fundamental traits that underlie human behavior (Fehringer, 2004). Another influential framework is **Carl Jung's model**, which distinguishes between two

opposing personality traits: introversion and extraversion. According to Jung (1953), extraverts are more focused on the outside world and are usually gregarious and vivacious, whereas introverts are more introspective and reserved.

Each of the three personality models we have discussed gives us different views on how personality works and what makes people unique. The Big Five looks at general traits, Eysenck's model points out the biological aspects, and the MBTI is all about how we think based on Jung's ideas. When we put these models together, they help us understand student personalities in schools and how these traits can affect language learning and interactions in the classroom.

2.3 Personality in Educational Contexts

Personality plays an important role in education as it determines how students think, feel, and behave in learning environments. Personality refers to consistent patterns of an individual's actions, reactions, opinions, and feelings in social situations (Mullanattom, 1993). Studies show that personality differences have a significant influence in different areas of education, like motivation, classroom conduct, and learning style. For instance, Poropat (2009), through a large meta-analysis t found that conscientiousness is strongly related to academic performance more than intelligence, because of its association with self-discipline and good study habits. Furthermore, Komarraju et al. (2011) found that openness to experience was also significantly correlated with intrinsic motivation and creative thinking, showing that students who score high on this dimension are more intellectually curious and engaged, which makes them have a better learning experience in dynamic and interactive environments. These findings demonstrate that understanding of the influence of personality in education.

2.4 Introversion Vs. Extroversion in the Educational Context

2.4.1 Definition of Extroverts and Introverts

Introversion and extroversion are among the fundamental personality traits that characterize human behavior. These traits explain how people usually react in social situations and where they get energy. However, these concepts originated in the early 20th century (1920s), when Carl Gustav Jung introduced these terms in his psychological theory. His research laid the foundation of different personality theories and assessments, including the Myers-Briggs Type Indicator (MBTI) and the Big Five Personality Traits (Roberts et al.,

2022), which continue to be used to understand individual behavior and preferences. Jung's theory classifies individuals into two broad categories—introverts and extroverts—based on the orientation of their focus: inward (introverts) or outward (extroverts) (Roberts et al., 2022) this classification emphasizes the way people gain energy and process the world around them.

First, the term "extrovert" refers to someone who is outgoing and enjoys being around others. They are usually friendly and sociable, energized by interacting with others; they like social activities and open discussions. but they are not uncomfortable with solitude and quietness. According to Jung, an extrovert is defined as a person who is primarily oriented towards the external world and is often shaped by their surroundings (Roberts et al., 2022), which emphasises their preference for external stimuli and social interactions. Extraversion, as outlined in the Big Five model (Goldberg, 1992), refers to the extent to which individuals exhibit traits such as being talkative, sociable, spontaneous, lively, and energetic. Moreover, extroverted individuals tend to be more inclined toward engaging in risk-taking activities, including behaviors that may pose health risks, which reflects their tendency to seek excitement and stimulation (Shiota & Kalat, 2018). This indicates that extroverted individuals are risk-takers and courageous individuals.

On the other hand, an introvert is someone with a personality characterized by introversion. Carl Jung (1921) defines introverts as "the attitude type characterized by orientation in life through subjective psychic content" (p.414). This means that an introverted person is mainly focused on the inner thoughts and feelings, rather than the outside world. Additionally, Jung adds: "The introvert is focused on the internal world of reflection, dreaming, and vision" (p.414). This indicates that introverts are dreamers and imaginative, spending time creating ideas rather than focusing on the outside world. Furthermore, introverts may favor solitary, contemplative, and self-directed study (Stewart, 2019), which means they are more comfortable working independently and often excel in activities that require deep thinking and concentration.

2.4.2 Characteristics of introverted and extroverted learners:

In educational settings, introverted and extroverted learners exhibit distinct qualities that influence how they interact and engage in the classroom environment. First of all, Susan Cain (2012) observes that introverted learners "listen more than they talk, think before they speak, and often feel they communicate better in writing than in conversation" (p. 5). Similarly, Brown (2007) describes introverts as reserved and cautious, engaging less

in spontaneous speaking activities; he further highlights that they are reflective, analytical, and more capable of focusing on the details of language learning when given time and space to do so "(p. 176). This means that introverts are more reserved and thoughtful in their speech, reflecting deeply and paying attention to detailed linguistics only when they have the time and space to do so. Moreover, Eysenck and Michael W. Eysenck (1985) elaborate on the concept that introverts exhibit higher levels of cortical arousal compared to extraverts. So, they do not need a lot of external stimulation and may feel overwhelmed in noisy or busy environments (p. 35). As a result, these learners often avoid noisy or overly interactive classrooms and instead favor calm, focused spaces that support deep concentration and effective learning.

On the other hand, Brown (2007) notes that extroverts are generally sociable, outgoing, and more comfortable participating in group discussions and spontaneous speaking activities. They tend to be very open to interacting with other students and most of the time prefer talking to writing. Also, they tend to enjoy taking communicative risks, which greatly improves their fluency and confidence in speaking. This trait is particularly emphasized by Dörnyei (2005), who highlights that they are "more willing to initiate conversations and less anxious about making mistakes" (p. 145). Such confidence can facilitate active participation in language learning tasks. Additionally, Myers and Myers (1995) differentiated between introversion and extraversion, characterizing introversion as a personality type that primarily focuses on their internal world, including thoughts and ideas. On the other hand, extraverts are more engaged with the external environment, particularly the people and objects around them (Myers & Myers, 1995).

For more depth on the behavioral tendencies associated with each personality type, Eysenck (1965) outlined a set of characteristic behaviours for extroverts and introverts, as summarized in the following table:

Table 2.1

Characteristic Behaviors of Extroverts and Introverts (Eysenck, 1965)

	Extroversion	Introversion
Sociability/Interaction	Like parties, need to have people to talk	Reserved and distant except to intimate friends
Excitement	Crave excitement; act on the spur of the moment	Do not like excitement; distrust the impulse of the moment
Expenditure of energies	Carefree, easy-going, optimistic; like to 'laugh and be merry'; altogether their feelings are not kept under tight control	Reliable, take matters of everyday life with proper seriousness; pessimistic; quiet, retiring sort of person
Risk-taking/planning	Take chances; generally, like change	Plan ahead; 'look before they leap'; like a well-ordered mode of life.
Interest in external events	Do not like reading or studying alone	Fond of books rather than people

The table highlights the main differences between extroverts and introverts regarding their behavior and personality traits. Extroverts are typically outgoing, full of energy, and thrive in social and stimulating situations. On the other hand, introverts are often more reserved, reflective, and prefer calm, organized settings. These characteristics can significantly affect how students participate in classroom activities extroverts usually enjoy interactive tasks and group projects, while introverts might lean towards individual assignments that give them space to think and focus.

2.4.3 Differences in Language and Learning Styles

It is obvious that every learner has different ways of learning, which suit them and make them feel comfortable during their learning process. Awla (2014) emphasizes the idea that it is essential to understand and deal with student learning styles and preferences because they both pattern in the classroom benefits. In light of this idea, Extroverted and introverted learners have unique preferences shaped by their personality in how they engage with their learning environment. Awla (2014) identifies six learning styles, which are listed as follows:

visual, Auditory, kinesthetic, interpersonal (social), and interpersonal (individual), read/write learning styles

2.4.3.1 Extroverts' Preferred Learning Styles

2.4.3.1.1 Kinesthetic

Extroverts are kinesthetic learners; they like movement and work with touchable objects, they like to take breaks and walk around the classroom (Oxford, 2001 as cited in Mehiri, 2023, p.4). According to El Massal and Fadly (2017) found that extroverts "prefer experimental learning and physical involvement activities (p.14), which means that this trait is energized by experiments and physical activities like role play and real-life examples.

2.4.3.1.2 Interpersonal (Social)

Extroverted learners tend to enjoy group work and collaborative tasks; they find learning effective when interacting with their peers. According to Thompson et al (2008) said that extroverts "prefer working in teams and engaging in collaborative activities that allow for verbal expression and social feedback" (p. 88).

2.4.3.1.3 Auditory

"Auditory learners gain information through aural channels such as verbal discussions and listening to others' speech" (Mehiri, p.4). They gain benefit from reading aloud, and they may not use written materials (ldpride, n.d). This aligns with extroverted learners who enjoy listening and speaking in social environments. Barrick and Mount (1996) emphasize that extroverts are processing ideas through verbal communication and external feedback such as discussion, debates, and oral presentations.

2.4.3.2 Introverts' preferred learning styles

2.4.3.2.1 Intrapersonal (solitary)

Introverts tend to be more focused on themselves and process information through reflection. They frequently favor self-paced activities and studying alone, as Barrick and Mount (1996) highlighted that Introverts are "more independent in their learning and less reliant on external stimulation" (p. 14)

2.4.3.2.2 visual:

Introverts are also visual learners. These types of traits, like visual methods such as diagrams, graphs, pictures, etc., Introverts tend to learn more effectively through visual materials because their reflective and observant nature allows them to engage deeply with visual content. As Forrester and Tashchian (2010) highlight, those introverts "engage deeply

with visual representations of content due to their observational and reflective nature" (p. 219).

2.4.3.2.3 Read And Write Learning Styles

These particular students appreciate reading and articulating their comprehension in written form. According to Cantwell and Andrews (2002), "introverted students often display a preference for written communication and information processing in solitude" (p. 125). This emphasizes that tasks that require writing best suit their quiet learning styles.

From these preferences, we can say that extroverted learners prefer kinesthetic, interpersonal, and auditory styles of learning that integrate action, collaboration, and speech due to their active sociable nature. On the other hand, introverted learners are more inclined towards intrapersonal, read/write, and visual styles as they promote independence and deeper self-reflection. Recognizing the tendencies helps us create more effective and inclusive learning environments that consider both personality traits and learning requirements.

2.4.4. Differences in their language learning strategies

Language learning strategies refer to the deliberate or automatic actions, mental activities, and thought processes that learners use to support their acquisition of a target language (Schmitt, 2010; Weinstein, 1988; Cohen, 2011). This indicates that language learning not only needs conscious efforts but also automatic habits and mental strategies that help learners in acquiring the language. However, However, the way these strategies are used can differ significantly among learners, particularly due to individual differences in personality traits. One of the most significant personalities that influences language learning is extroversion and introversion. Ehrman and Oxford (1990) examined this connection through a study involving twenty adult learners of Turkish. Using the Myers-Briggs Type Indicator (MBTI), they found a positive link between extroversion–introversion and the use of language learning strategies. Extroverted learners were more inclined to adopt social strategies, such as **collaborative learning strategies** with their peers, and **functional strategies** like creating learning opportunities outside the classroom. In contrast, introverted learners tended to study **independently,** avoided frequent social interactions, and appeared to favor **metacognitive strategies**. Another study by Wakamoto (2000) also highlights the specific learning strategies that both traits use. In this study, they involved 254 Japanese EFL learners, they found a strong connection between extroversion and the types of language learning strategies used by students. The results showed that extroverted learners were more

likely to apply **functional and social-affective strategies** compared to their introverted peers. Additionally, extroverts appeared to focus more on **overall meaning rather than linguistic form**. The study also revealed that extroverted students tended to ask more questions in class than introverts, reinforcing what many language teachers observe about extroverted learners' active participation. In a university-based study in Turkey, Kayagum (2013) examined the same issue, focusing on 106 extroverted and 94 introverted students. They use the Eysenck Personality Questionnaire (EPQ) alongside the Strategy Inventory for Language Learning (SILL), the study revealed that introverted learners favored **metacognitive and cognitive strategies** more than their extroverted o. It was also found that introverts generally made use of a wider range of language learning strategies compared to extroverts.

Ehrman and Oxford (1989) suggested that extroverted learners are more likely to employ **affective and social strategies**, as well as engage with authentic language use, while introverted learners typically rely on **independent and self-regulation strategies**.

Tosumup, both extroverted and introverted learners use language learning strategies, but their preferences reflect their distinct personality traits. Extroverted learners tend to favor social, affective, and functional strategies, such as group c ollaboration, classroom participation, and real-

life language use. On the other hand, introverted learners often rely more on metacognitive, cognitive, and self-regulation strategies like independent studying, reflection, and self-studying, which suit structured studying. This variation in language learning strategies between extroverted and introverted students highlights the significant role personality traits play in shaping their approaches to acquiring knowledge.

2.4. Personality Traits and Perceptions of Collaborative Learning

In recent years, higher education institutions have increasingly shifted from traditional, teacher-centered instruction to more student-centered. This transition emphasizes the active role of learners in constructing knowledge through meaningful social interaction. Walker (2007) supports this shift, noting that collaborative work has become a fundamental component of modern higher education. While group work is widely promoted for students' motivation and engagement, it suggests that individual personality traits may play a crucial role in shaping these experiences.

2.4.1 The Pedagogical Value of Group Work

Group work is a widely recognized pedagogical strategy that promotes the co-construction of knowledge, teamwork, and mutual support. It enables students to complete

tasks collectively in dynamic, interactive learning environments (Rance-Roney, 2010). Through collaborative engagement, learners become more involved, interdependent, and capable of reaching goals that may be difficult to achieve individually (Sajedi, 2014; Hammar Chiriac, 2014; Gölmleksi'z, 2007). As Burke (2011) asserts, group work is among the most effective active learning practices, and since the early 20th century, researchers have emphasized its critical role in enhancing student learning (Lou et al., 1996; Gillies & Boyle, 2011).

2.4.2 The Role of Personality in Student Engagement

Personality traits significantly influence how students experience and respond to collaborative learning environments. Barrick and Mount (1996) found that students with sociable and agreeable traits tend to enjoy group interactions and participate more actively. El Massah and Fadly (2017) support this view, asserting that such personality traits strongly affect students' engagement and satisfaction in group-based activities. Moreover, several studies reinforce the idea that personality differences directly influence students' orientation toward group learning. Thompson et al. (2008), Cantwell and Andrews (2002), and Forrester and Tashchian (2010) emphasize that individuals with certain personality profiles—especially those who are more cooperative and socially comfortable—tend to thrive in collaborative contexts. These learners are often more successful, satisfied, and engaged when working collectively, compared to those who prefer individual tasks.

2.4.3 Introverts and Extroverts in Collaborative Learning

In group learning situations, extroverts and introverts behave and interact differently, which shows how these individuals interact, participate, and behave during collaborative learning. Extroverts are conversation leaders; they have a natural ability to speak up and initiate the discussion. According to Offir, Bezalel, and Barth (2007), extroverts often speak or act quickly in group tasks, frequently initiating discussions and taking on leadership roles. which helps to get everyone involved. Nussbaum (2002) supports this idea, he argues that extroverted learners are vocal learners who can take over conversations. Moreover, Ehrman and Oxford (1990) discovered that extroverts are more inclined to use social learning methods like working with peers to enhance their learning. This shows their preference towards collaborative learning.

On the other hand, introverted students tend to think more before they act in group settings. Instead of being directly involved, they always listen closely before sharing their

thoughts. As Offir, Bezalel, and Barth (2007) state that "introverts observe more than they speak and prefer to contribute only after careful thought." Kayaoğlu (2013) also found that introverts prefer strategies that involve thinking about their thinking, like planning and evaluating their contributions, which fits with their tendency to process information internally. This means that while extroverts lead conversations, introverts add depth to the discussion. Therefore, both personality types enrich collaborative learning: extroverts promote interaction and start conversations, whereas introverts add their contribution by deepening the group's understanding.

2.5 Challenges of Collaborative Learning based on personality differences

Collaborative learning represents a fundamental aspect of contemporary education, fostering communication, problem-solving, and mutual assistance. Nonetheless, variations in personality traits, particularly between introverted and extroverted students, present distinct challenges that can influence group dynamics and individual learning outcomes. One prevalent issue is the unequal participation. Extroverted learners are generally more vocal, dynamic, and inclined to assume leadership roles in discussions, frequently initiating ideas and propelling the task forward (Jang & Park, 2016). While this can enhance productivity, it may affect introverted peers, who tend to favor internal reflection and may hesitate to contribute without sufficient time to process information. Walker (2007) highlights that introverted students often engage less not due to a lack of interest or knowledge, but rather because of discomfort in unplanned verbal interactions.

Another issue is the misinterpretation silence. Introverted students might be viewed by educators or classmates as unengaged but in reality, they are actively contemplating the discussion internally (Ndolo, 2021). Such misconceptions can adversely affect peer assessments, participation scores, and even the self-esteem of students. Rios et al. (2018) highlight that this phenomenon is particularly pronounced in English as a Foreign Language (EFL) context, where introverted learners encounter compounded difficulties: dealing with language anxiety and adhering to group interaction expectations. The unequal composition of group members is also pivotal. Homogeneous groups—particularly those consisting solely of extroverts—tend to express high levels of satisfaction due to their similar communication styles, yet they may lack the variety of viewpoints essential for profound learning (Lau & Jin, 2019). Conversely, the composition of group members plays a crucial role. mixed personalities can be very effective, but need to be structured thoroughly to prevent the

marginalization of quieter participants. In the absence of this, it may affect group members, resulting in dissatisfaction among introverted group members (Walker, 2007) An additional challenge is related to **assessment practices**. Group work evaluations often emphasize visible forms of participation, such as speaking or leading discussions, while undervaluing less noticeable but equally valuable contributions like taking notes, researching, or organizing ideas (Lykourentzou et al., 2015). This tendency can disadvantage introverted students, who may provide valuable input through written assignments or behind-the-scenes contributions. Ndolo (2021) indicates that these students often perceive their efforts as undervalued in grading systems that prioritize verbal engagement. To address these issues, scholars propose the adoption of inclusive approaches. For instance, Jang and Park (2016) recommend the assignment of specific roles within group activities to promote equitable contributions, which means that assigning particular roles to each group member during group activities can help ensure that everyone contributes fairly and equally to the task at hand. Similarly, Lau and Jin (2019) supported the idea by the implementation of structured collaboration frameworks that acknowledge both verbal and non-verbal participation. Such strategies not only affirm diverse expressions of personality but also enhance group unity and educational outcomes.

2.6 Conclusion

This chapter has discussed personality traits from different psychological angles, especially focusing on extroversion and introversion. It covered important theories like the Big Five Personality Traits, Eysenck's Three-Factor Model, and the Myers-Briggs Type Indicator to help us understand how personality traits are defined, categorized, and assessed. Additionally, it discussed how extroverted and introverted students vary in their traits, thinking styles, classroom behavior, and language learning methods. The chapter also pointed out how personality affects students' involvement in school, especially in group work. By discussing the differences between extroverts and introverts, it prepared us to see how these traits influence how students view and interact in team-based learning activities. The next chapter will expand on this to explore how these personality differences play out in real-life group learning situations

Chapter Three:
Fieldwork and
Data Analysis

3.1 Introduction

After discussing the two principal variables of this study, collaborative learning and personality traits (extroversion versus introversion) in the previous theoretical chapters, this chapter moves to the practical field of the study. It focuses on how the research was carried out and the particular tools and techniques employed for data collection and analysis.

First of all, this chapter presents details about the research's methodology, the participants, the employed instruments, as well as the methods used during the data collection process. Then, it provides an analysis of qualitative findings from the administered questionnaires and teacher interviews. Finally, it moves to discuss and interpret these findings. In addition to that, the limitations and future recommendations that suggested for better conducting this study.

3.2 The Research Methodology for this Study

According to Williams (2007), research can be conducted using three main approaches: qualitative, quantitative, or a combination of both, known as the mixed-method approach. In this study we use a mixed-methods research design as it helps to gather data of both qualitative and quantitative to better understand experiences, perceptions, and behaviors of specific phenomena. Dornyei (2007), defines this approach as "a sort of a combination of qualitative and quantitative methods within a single research project" (p. 44). For this reason, this study seeks to explore how students' personality traits, specifically extroversion and introversion, influence their perceptions, preferences, and participation in collaborative learning settings This research employs a descriptive design, as the study aims to identify the perceptions, preferences, and challenges of EFL students and teachers at Biskra University to gain a deep understanding of how extroverted and introverted learners perceive collaborative learning. Moreover, it seeks to gain new insights into the influence of personality traits in group work and how teachers adopt strategies to meet the needs the learners during group work.

The mixed-methods approach is most appropriate and aligns well with the research aims and objectives of this study. Quantitative data is included through the use of a personality test and closed-ended questions, which provide us with measurable insights to help classify students as introverted or extroverted and identify their perceptions, preferences, and challenges toward collaborative learning. On the other hand, the qualitative data through open-ended questions and semi-structured interviews. To offer deeper insights about the perceptions

and experiences, and challenges students face and the strategies teachers employ to support both extroverted and introverted students in their collaborative learning

3.3 Population, Sample, And Sampling Techniques

The target population of this study is third-year EFL students (Academic year 2024_2025) at the Department of English, Faculty of Letters and Languages, Mohamed Kheider University of Biskra. A sample of 40 out of 358 third-year students was selected as the population of the study to get the needed information and achieve the research questions and objectives. These students were selected through a random sampling technique to ensure that each student had an equal chance of participation for both introverted and extroverted learners. third year selected because they use group work in their studies, such as group discussions and research projects and peer assignments, which makes them suitable for our study.

Additionally, six (6) teachers of English at the Department of English language at Biskra University were interviewed in the study to provide deeper insights into their perspectives on how students' personality traits influence their experiences in collaborative learning. These teachers were selected purposefully rather than randomly based on their familiarity with using collaborative learning method during their teaching career.

3.4 Data Collection Methods

The current research employs two common research tools, a semi-structured questionnaire and a semi-structured interview. the data collected to gather both teachers' and students' perspectives and opinions on the influence of personality traits, specifically extroversion and introversion traits, on their collaborative learning. Concerning the first instrument, an online questionnaire was administered via Google Forms and shared through their Facebook groups. The questionnaire was used to gather data about students' perceptions of how personality traits, especially extroversion and introversion, influence on their perception of collaborative learning. On the other hand, a face-to-face interview was conducted to six teachers of English, their answers were collected in seven days separately to gain more information on the influence of students' personalities on their group work and their suggested strategies used to ensure to balance the needs of every extroverted and introverted learner.

3.5 Data Analysis Method

Collected data was analyzed using thematic analysis for qualitative and quantitative data. Concerning the first instrument, the first part which is the personality test (BF2 extroversion scale), its results   was analyzed to classify students as either introverted or extroverted to ensure a balanced selection for further analysis. the second part of the questionnaire, responses was analyzed using both quantitively and qualitative. Close - ended questions analyzed thematically using descriptive statistics to summarize and identify students' perceptions, preferences and challenges of collaborative learning while open ended responses coded into themes and patterns to reveal common experiences, challenges and benefits for both introverted and extroverted students. However, the data collected through interviews was analyzed also using this qualitatively analytical technique to investigate their perceptions of collaborative learning and how they believe the personality influence student participation during collaborative learning.

The use of this method enables a better understanding of the differences between introverted and extroverted learners in collaborative learning settings and provide valuable insights into how teachers can accommodate diverse personality traits in EFL classrooms.

3.6 Description of Student's questionnaire

This questionnaire serves as the main data collection tool to gather information from students in order to accomplish the research objectives. To explore the influence of personality traits specifically extraversion and introversion on students' perceptions of collaborative learning, a semi-structured questionnaire was developed and administered to 40 students out of 358 third-year LMD English students at Mohamed Kheider University. This representative sample was selected randomly to participate in the study. The questionnaire was administered online and distributed via their Messenger groups in the form of Google Forms.

The questionnaire was divided into two major parts, designed to address a specific aspect of the research objectives. The first part was Personality Trait Identification (Extroversion–Introversion)**.** This part aimed to identify the personality type who is extrovert and who introvert from the participants. To achieve this, a shortened version of the Big Five Inventory–2 (BFI-2), developed by Soto and John (2017), was used. The BFI-2 is a validated instrument for measuring the Big Five personality traits: Extroversion, Agreeableness, Conscientiousness, Negative Emotionality (Neuroticism), and Open-Mindedness.

In this study, we deal only with the "Extroversion" dimension. This version included 8 statements, and each participant had to rate each statement on a 5-point Likert scale, ranging from "Strongly Disagree" to "Strongly Agree". This test served as a data collection and a data tool in order to help in the interpretation of extroverted and introverted learners.

The table below outlines the 8 statements used, along with the trait each one indicates:

Table 3.1:

The extroversion scale of the BIG FIVE inventory-2 BF-2 statements

Statement	Trait
1.I enjoy participating in group discussions in class	Extraversion
2.I prefer working alone rather than in a group.	Introversion
3. I feel energized when interacting with my classmates.	Extraversion
4.I am comfortable expressing my thoughts in front of others.	Extraversion
5.I tend to keep my opinions to myself during group work.	Introversion
6.I find it easy to start conversations with new classmates.	Extraversion
7.I enjoy social interactions in learning environments.	Extraversion
8.I feel more comfortable listening than speaking in group activities.	Introversion

The second part was about the Perceptions of Collaborative Learning. This part aimed to gather both qualitative and quantitative data regarding students' perceptions, preferences, and challenges related to collaborative learning. The creation of the questionnaire was based on the research questions to ensure that all crucial points addressing the main purpose of the current study were covered.

It is divided into three sections; each section designed according to the objectives and research questions of the study. These sections are: student perceptions, student preferences and student challenges. It consisted of ten (13) closed-ended questions, where students were required to choose from the list of options the best that described their experiences and preferences, along with (2) open-ended questions.

The questionnaire was designed using Google Forms and was published online for third-year students to collect data about their perceptions, preferences, and challenges regarding the influence of personality traits on their collaborative learning.

To analyze data from both parts of the questionnaire, a thematic analysis was adopted using descriptive statistics because the nature of the data is quantitative and qualitative.

Concerning the personality test, the students' responses to the 8 items were scored according to the BFI-2 scale, the scores were calculated individually to categorize and identify students as introverted or extroverted. Descriptive statistics were used to quantify the distribution of personality types within the sample. Then we present Frequencies and percentages using tables, pie charts, and bar graphs, for a clear and understandable comparison of personality traits. the same to the closed-ended questions of the questionnaire to examine how personality traits influenced their preferences, behaviors, and perceptions in collaborative learning contexts. Whereas the two open-ended questions were analyzed using thematic analysis to explore the students' preferences, perceptions, and challenges of both extroverted and introverted learners during collaborative learning.

3.7 Validating and piloting the students' questionnaire

Before administering the questionnaire to the students, it was validated and piloted to ensure the content validity and reliability. First, the questionnaire was piloted to check its comprehensibility of the questions, the wordiness, and to ensure that the questions measure the aims of the research. After piloting, we validated the questionnaire. It was sent to the supervisor, who suggested some modifications to the questions. All modifications take into consideration to administer the final version in a better format. then it was sent to (3) three EFL students from the 40 participants of the sample who did not find any difficulty in answering the questions.

3.8 Analysis of students' questionnaire

Section 01: Analysis of personality trait test (Extroversion -Introversion):
Statement 1: "*I enjoy participating in group discussions in class.*"

Table 3.2

Students' Responses to Statement 1

Scale	Student number	Percentage
Strongly disagree	2	5%
Disagree	3	7.5%
Neutral	9	22%
Agree	16	40%
Strongly Agree	9	22%

Figure 3.1

Distribution of responses to statement 1
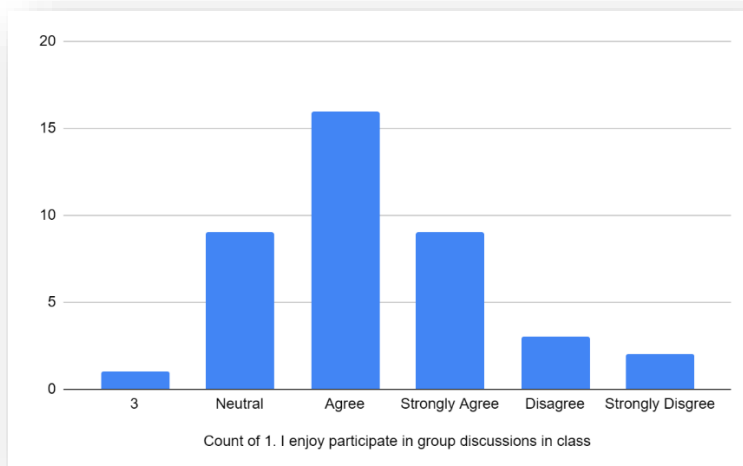
According to Table 3.1 and Figure 3.1, the results show that 62% of the students agreed or strongly agreed that they enjoy participating in group discussions. In addition, 22% gave a neutral response, while 7.5% disagreed and 5% strongly disagreed, bringing the total to 96.5%. The remaining 3.5% may represent missing responses, undecided students, or a roundingeffect.

This indicates that most students view class discussions positively. Because enjoying group discussions is frequently associated with being social, outgoing, and interactive, we noticed that 62% of respondents who gave a positive response most likely exhibited extraverted traits. Conversely, the 12.5% who disagreed or strongly disagreed might be an indication of introverted traits like a preference for working alone or discomfort in social learning environments.

The 22% of neutral answers indicate that a significant number of students are either unsure or that their involvement may vary depending on particular elements like the subject, group members, or classroom environment. A rounding mistake in reporting, invalid responses, or non-responses could be the cause of the 3.5% data gap. This distribution shows that although most students lean toward group learning, there is still a wide range of comfort levels that are probably influenced by each student's unique personality.

Statement 2: *"I prefer working alone rather than in a group."*
Table 3.3:

Students' Responses to Statement 2

Scale	Student number	Percentage
Strongly disagree	4	10%
Disagree	8	20%
Neutral	12	30%
Agree	8	20%
Strongly Agree	8	20%

Figure 3.2

Distribution of responses to statement 2

Count of 2. I prefer working alone rather than in group
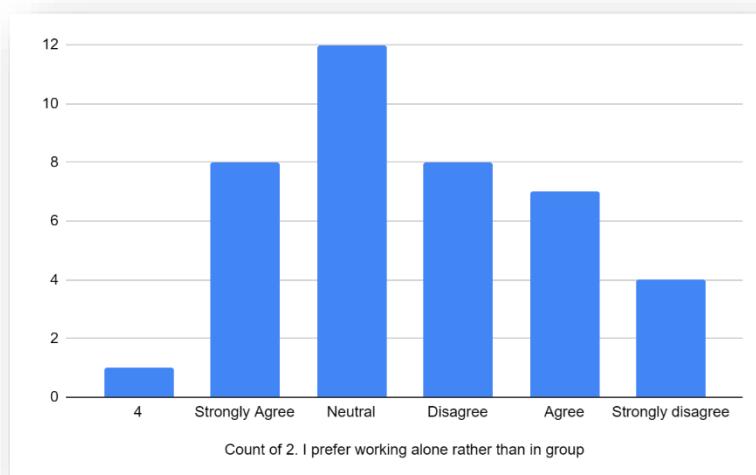
Table 3.2 and the findings for this statement show that 40% of students agreed or strongly agreed, 30% gave a neutral response, 20% disagreed, and 10% strongly disagreed. This indicates that a lower percentage of students (40%) have a favorable opinion of the statement, indicating that they might favor group projects, which are frequently linked to extraverted characteristics like sociability and interaction. However, we also discovered that

30% of students disagreed or strongly disagreed, for a total of 30%. This suggests that students prefer working independently, a tendency that is usually associated with introversion. The 30% of students who gave a neutral response might be an example of a flexible group whose preferences might vary depending on the task, the dynamics of the group, or the classroom. In group situations, these students may not strongly identify with either personality trait and may modify their behavior according to the circumstances

This distribution 40% extraverted, 30% introverted, and 30% neutral or flexible indicates a more mixed or balanced learning preference among students. Given that personality traits affect students' comfort and engagement in various learning environments, it emphasizes the significance of providing a variety of learning opportunities that accommodate both independent and collaborative learners.

Statement 3:" *I feel energized when interacting with my classmates.*"**

 Table3.4

Students' Responses to Statement 3

Scale	Student number	Percentage
Strongly disagree	**1**	**2.5%**
Disagree	**5**	**12%**
Neutral	**3**	**7.5%**
Agree	**21**	**52.5%**
Strongly Agree	**8**	**22.5%**

Figure 3.3

Distribution of responses to Statement 3

Count of 3. I feel energized when interacting with my classmates
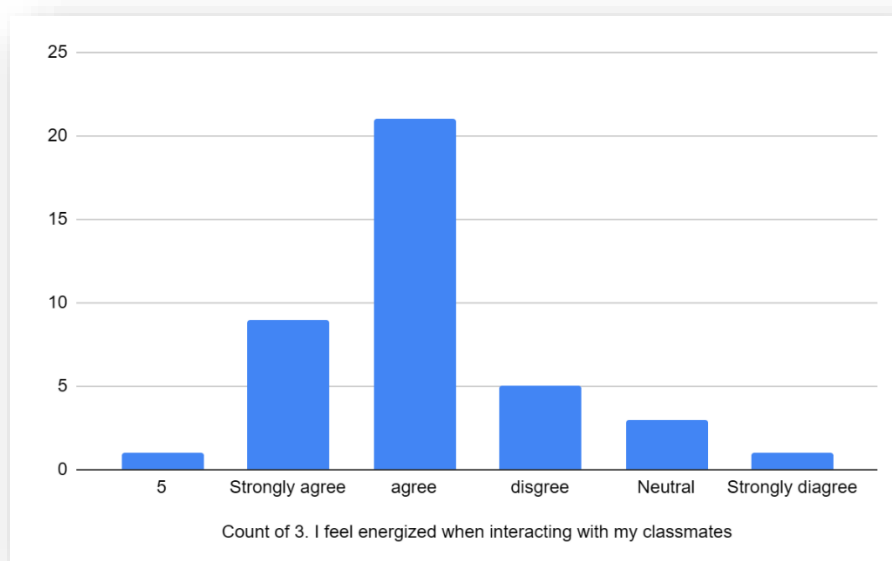
Table 3.3 and Figure 3.3 show that 55% of the students agreed or strongly agreed with the statement, indicating that social interactions give them energy. Furthermore, 20% of students disagreed or strongly disagreed, and 25% selected the neutral option. this means that extraverts frequently enjoy and get energy from interacting with others, which indicates that the majority of students are likely to display extraverted traits. These students frequently flourish in lively, interactive settings that encourage cooperation and dialogue. However, the 20% who disagreed might be introverted because they may find social interaction stressful or exhausting. According to the 25% of neutral responses, some students might not have a clear preference, or their comfort in social settings may vary depending on the con

text. These findings indicate that while most students are comfortable with and energized by social learning situations, the majority of the students may require quieter, more reflective learning spaces to perform at their best.

Statement 4: "*I am comfortable expressing my thoughts in front of others***"**.

Table 3.5:

Students' Responses to Statement 4

Scale	Student number	Percentage
Strongly disagree	**0**	**0%**
Disagree	**5**	**12.5%**
Neutral	**16**	**40%**
Agree	**14**	**35%**
Strongly Agree	**4**	**10%**

Figure 3.4

Distribution of responses to statement 4

Count of 4. I comfortable expressing my thoughts in front of others
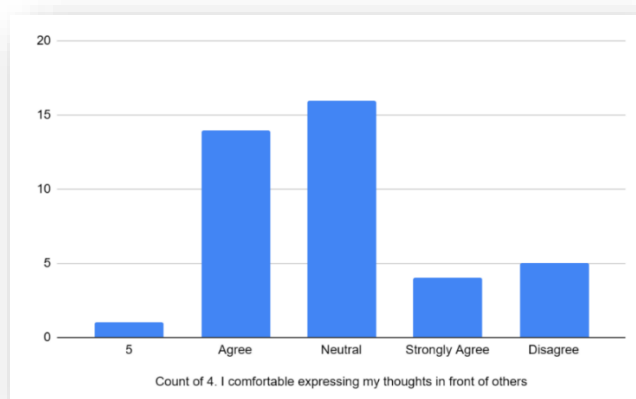
Table 3.4 indicated that 57.5% agreed or strongly agreed that the students find it easy to share their ideas in a public setting. In contrast, 27.5% disagreed or strongly disagreed, and 15% answered neutrally. The majority of students indicating that they are comfortable speaking to groups aligns with extraverted characteristics, where learners who are extraverted tend to be more confident and expressive in these types of public settings. We noted that about 45% were aligned with those types of typical extraverted behavior. The 27.5% of students who disagreed are likely showing introverted characteristics (such as shyness or nervousness to speak to a group and needing to interact and engage one-on-one). The 15% neutral answer says that some of these students are comfortable but that comfort in speaking may depend on the situation or audience.

To summarize, there are a number of learners who are willing to speak in front of other students, which seems to display a level of comfort and confidence in doing so. Conversely, there are a significant number of students who may require more support or alternative ways to express their ideas.

Statement 5: "*I tend to keep my opinions to myself during group work.* "

Table 3.6:

Students' Responses to Statement 5

Scale	Student Number	Percentage
Strongly disagree	8	20%
Disagree	14	35%
Neutral	8	20%
Agree	6	15%
Strongly Agree	3	7.5%

Figure:3.5

Distribution of responses to statement 5

Count of 5.I tend to keep my options to my self during group work
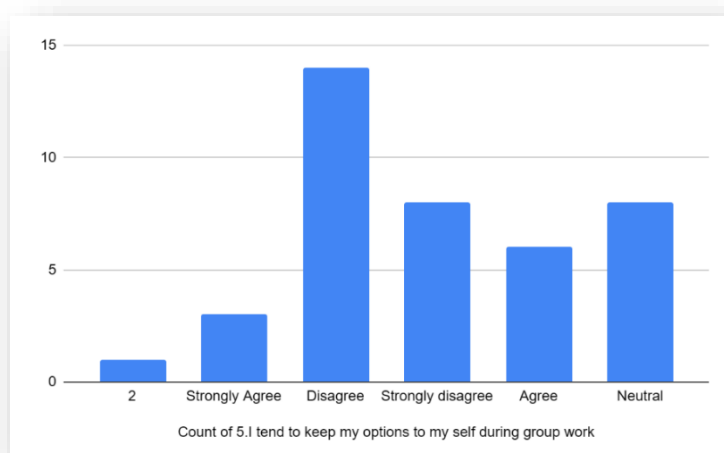
Table 3.5 shows that 42.5% of students agreed or strongly agreed with this statement, indicating that they prefer to remain quiet when working in groups. Since introverts prefer to observe and think rather than speak up during group projects, this behavior is usually linked to introverted traits. More extraverted traits, like being talkative and active in group situations, were indicated by 22.5% of students who disagreed or strongly disagreed. 35% of participants gave a neutral response, indicating that many students' behavior may vary due to the environment, topic, or group dynamics. The variety and flexibility of students' involvement in group projects are reflected in the overall balance of personality traits we found, with

approximately 52.5% showing extraverted tendencies and 52.5% demonstrating introverted tendencies.

Statement 6: "*I find it easy to start conversations with new classmates.*"

Table 3.7:

Students' Responses to Statement 6

Scale	Student number	Percentage
Strongly disagree	1	2.5%
Disagree	11	27.5%
Neutral	6	15%
Agree	14	35%
Strongly Agree	1	17.5%

Figure 3.6:

Distribution of responses to statement 6

Count of 6. I find it easy to start conversations with new classmates
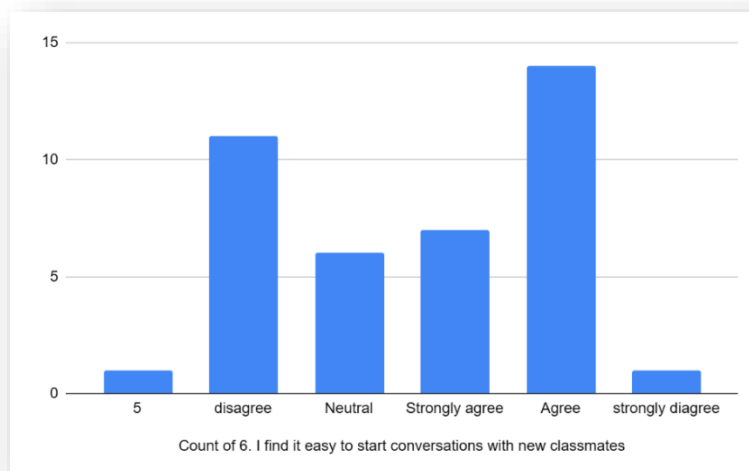
Concerning statement six, the results in Table 3.6 show that 47.5% of students agreed or strongly agreed, suggesting half of the students feel confident starting a conversation. This is an indicator of extraverted trait. These students are likely comfortable taking the lead in social interactions and engaging with peers without hesitation. However, 30% of students disagreed or strongly disagreed, which indicates that they may struggle with starting conversations, a trait commonly linked to introversion and social shyness. The remaining

22.5% responded by neutral option, which may reflect situational confidence or uncertainty depending on the context.

According to these finding, 52.5% of students show signs of extraversion, while 30% lean toward introversion, highlighting varied comfort levels with social initiation in the classroom. This suggests that while many students are socially confident, a considerable number may benefit from more supportive or structured interaction opportunities

Statement 7: "*I enjoy social interactions in learning environments.*"

Table 3.8:

Students' Responses to Statement 7

Scale	Student Number	Percentage
Strongly disagree	1	2.5%
Disagree	1	2.5%
Neutral	9	22.5%
Agree	17	42.5%
Strongly Agree	11	27.5%

Figure 3.7:

Distribution of responses to statement 7

Count of 7. I enjoy social interactions in learning environments
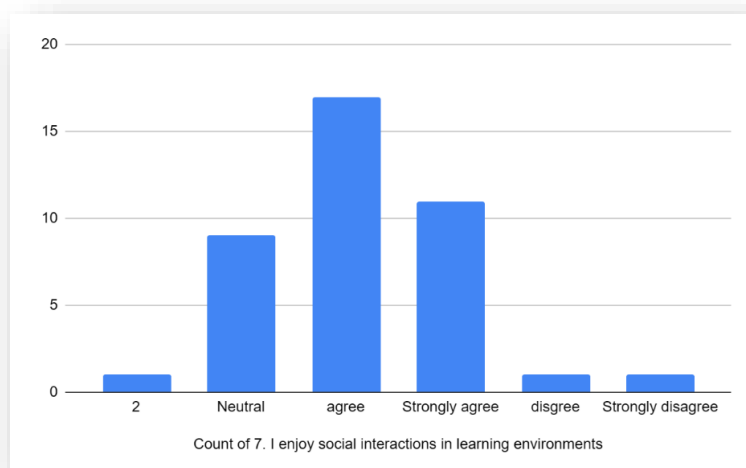
According to the results of Table 7, we found that 65% of students agreed or strongly agreed with the statement, indicating that they enjoy learning through social interaction. This strongly liked to extraverted characteristics, as extraverts typically thrive in collaborative and peer-based learning environments. In contrast, only 12.5% of students disagreed or strongly disagreed, suggesting that a small percentage may prefer quieter, and prefer independent learning, which is commonly associated with introverted learners. Additionally, 22.5% of

students selected the neutral option, indicating that their preference might depend on the learning context or group setting.

Overall, we found that about 75% of students are extroverted, while only 5% are introverted, reinforcing the idea that social interaction plays a key role in how most students prefer to learn.

Statement 8: "*I feel more comfortable listening than speaking in group activities.*"

Table 3.9:

Students' Responses to Statement 8

Scale	Student Number	Percentage
Strongly disagree	2	5%
Disagree	5	12.5%
Neutral	3	7.5%
Agree	20	50%
Strongly Agree	9	22.5%

Figure 3.8

Distribution of responses to statement 8

Count of 8. I feel more comfortable listening than speaking in group activities
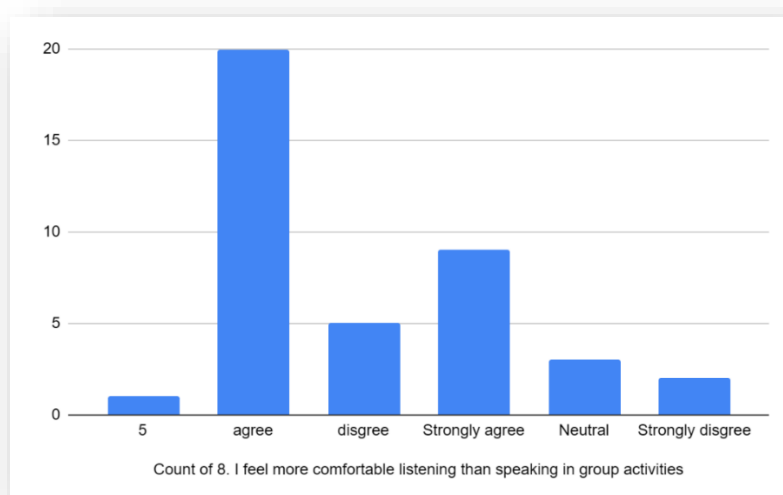
In the final statement, as seen in Table 3.8, we found that 52.5% of students agreed or strongly agreed with the statement, indicating a preference for listening rather than speaking during group work. This behavior is commonly associated with introverted traits, as introverts often feel more comfortable observing and processing information internally rather than taking the lead in conversations. Meanwhile, 25% of students disagreed or strongly disagreed, suggesting they are more likely to participate actively in group discussions, which is an

indication of extraversion. The 22.5% who responded neutrally may shift between listening and speaking depending on the group dynamic or topic. we found that 72.5% of the student's overall display extraverted characteristic**s** across the questionnaire, while 17.5% align more with introversion**.** This suggests that even students who are generally extraverted may prefer quieter roles in certain situations. This highlights the importance of including diverse participation roles in collaborative learning to accommodate different comfort levels and personality traits

The Overall distribution of personality traits

Table 3.10:

The total distribution of extroverts and introverts of third-year students

Personality Type	Number (N)	Percentage (%)
Extraverts	21	52.5%
Introverts	19	47.5l%
Total	40	100%

Figure 3.9

The total distribution of extroverts and introverts of third-year students
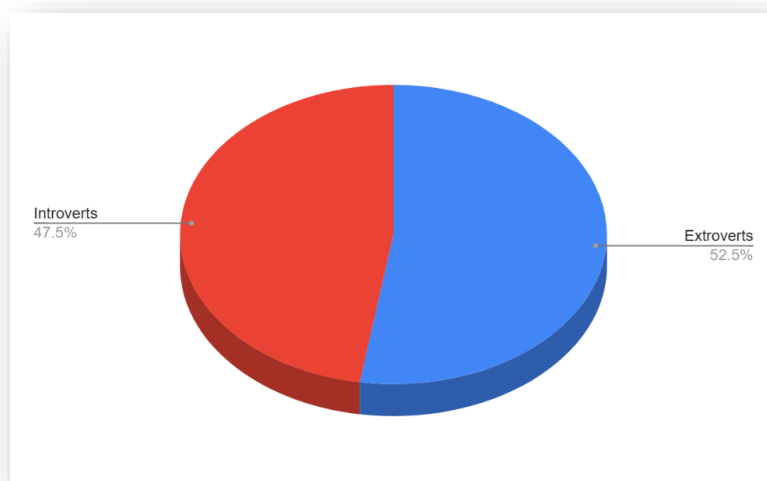
After we completed the analysis of the data obtained from the eight personality trait statements of the BFI-2, the results showed that the majority of third-year students at Biskra University (52.5%) were classified as extroverts, while 47.5% were identified as introverts (see Table 3.10). We found that both traits are relatively balanced, which indicates that both personality types are represented in the sample. These results are important for this study, as they allow for a fair comparison and deeper understanding of how these two personalities,"

extroversion and introversion", affect their perceptions, preferences challenges in EFL collaborative learning.

 Section 02: Students' Perceptions of Collaborative Learning

Question 1: *"Do you have an idea about what collaborative learning is?"*

Table 3.11:

Students' Awareness of Collaborative Learning Among Extroverts and Introverts

	Extroverts	**%**	**Introverts**	**%**
Yes	20	31%	9	2.61%
No	3	0.22%	8	0.88%
Total	23	100%	17	100%

Figure 3.10:

Students' Awareness of Collaborative Learning Among Extroverts and Introverts
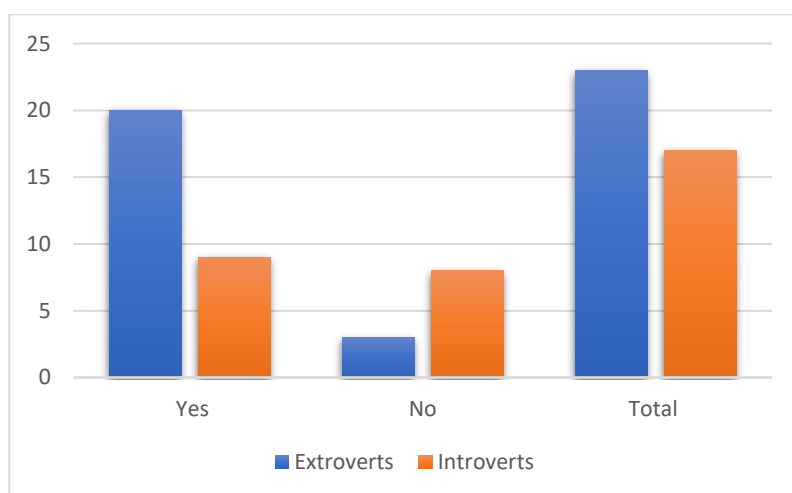
According to Table 3.11, the majority of extroverts (87%) have an idea about collaborative learning, whereas more than half of introverts (53%) also have awareness of this teaching method. This distinction implies that extroverts are more familiar with in collaborative learning contexts, most likely due to their outgoing and social personality.

Introverts, who prefer solitary or silent learning, may have received less exposure to collaborative learning concepts. The findings underscore the need of instructors taking these personality variations into account when adopting collaborative learning, ensuring that both extroverted and introverted students are supported and encouraged to engage effectively.

Question 2: *"Have you previously studied in a collaborative learning environment?"*

Table 3.12:

Extroverts and introverts Prior Experience of Collaborative Learning Environments

	Extroverts	**%**	**Introverts**	**%**
Yes	15	53%	14	50%
No	4	36%	7	58%
Total	19	100%	21	100%

Figure 3.11:

Extroverts and Introverts Prior Experience of Collaborative Learning Environments
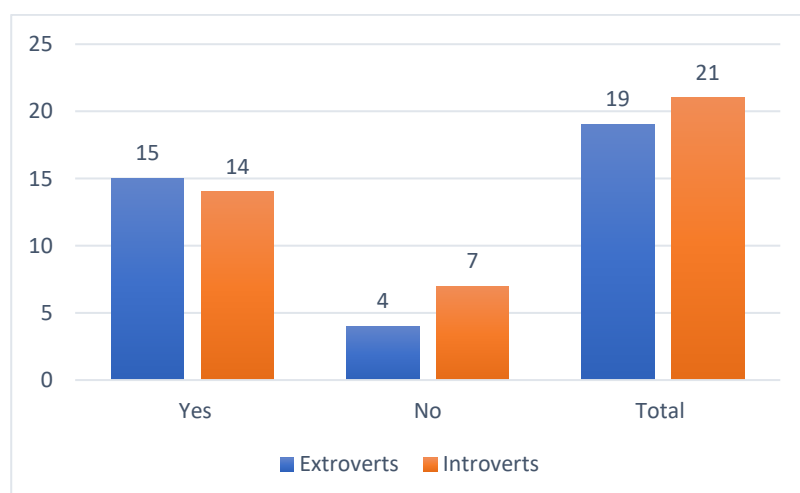
The findings in Table 3.12 show that the majority of extroverts and introverts had previously studied in a collaborative learning environment, but the percentages are significantly different. 53%, of Extroverts had participated in collaborative learning. Similarly, 50% of introverts have studied in a collaborative context, indicating basically equal engagement compared to extroverts. However, when it comes to those who have not studied

in collaborative contexts, both 36% of extroverts and 58% of introverts prefer this category. This shows that introverts are significantly more likely than extroverts who lack previous experience with collaborative learning. Overall, while both personality types play a major role in collaborative learning, extroverts tend to be more likely to have participated in such settings, whereas introverts are less experience of group work .

Question 03: *"Do you prefer working in groups or individually?"*

Table 3.13: *Extroverts and Introverts working Style Preferences*

	Extroverts	%	Introverts	%
In group	13	86%	2	13%
Individually	3	12%	22	88%
Total	15	100%	25	100%

Figure 3.11:

Extroverts and Introverts' Working Style Preferences
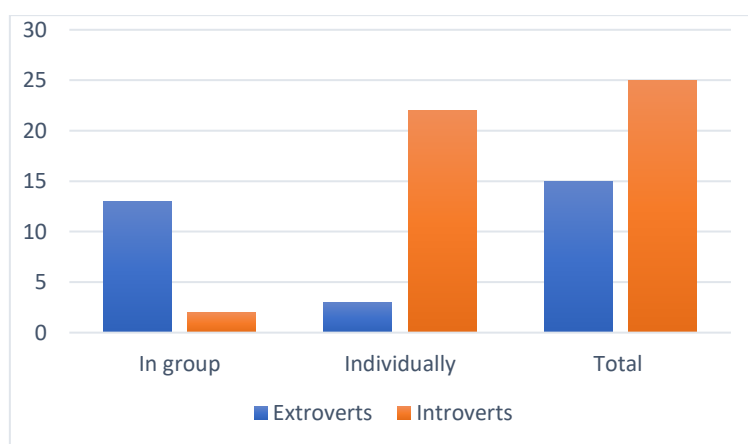
Table 3.13 shows significant variances in work preferences between extroverts and introverts. (86%) of Extroverts prefer to work in groups, which reflects their outgoing and social personality. In contrast, only 13% of introverts enjoy group work, whereas the great majority (88%) prefer to work alone. This result reflects introverts' natural desire to prefer isolated places where they can focus and think without any interruptions of group engagement.

The findings underline the necessity of taking personality types into account when designing collaborative tasks or learning activities, as well as providing both group and solo work options to accommodate varied preferences. A follow-up question.

Show the reason for that preference, which is presented in the second part of the question

Question 3: 2."If you selected 'individually', what is the main reason you prefer working individually? "

Table 3.14:
Reasons for Preferring Individual Work Among Extroverts and Introverts in EFL Classes

	Extroverts	%	Introverts	%
I prefer to work alone	2	20%	8	80%
I do not know how to work in groups	1	25%	3	75%
I feel uncomfortable being evaluated in a group	3	60%	2	40%
I can only work effectively on my own	3	50%	3	50%
Total	9	100%	16	100%
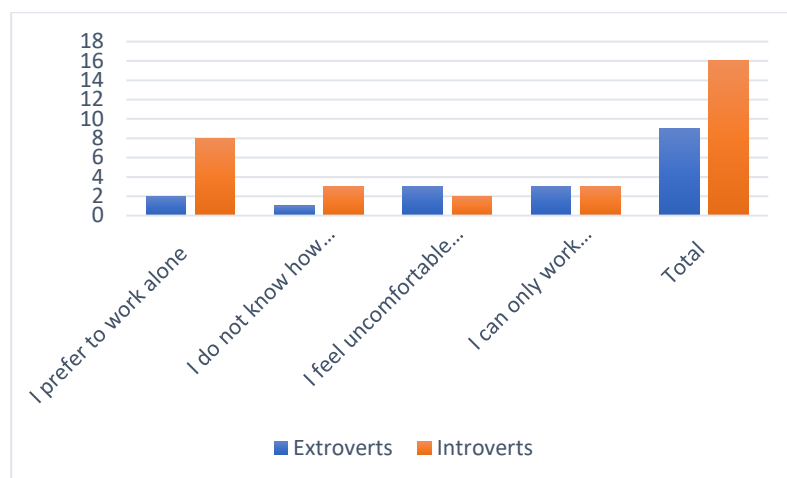
Figure 3.12:

Reasons for Preferring Individual Work Among Extroverts and Introverts in EFL Classes

Table 3.14 summarizes the key reasons of why extroverts and introverts prefer working individually in an EFL class. The first main reason among extroverts who prefer solitary work is feeling uncomfortable about being assessed in a group (60%), followed by equal amounts (50%) who believe they only work alone effectively , and those who like to work alone (20%). A low percentage (25%) said they didn't know how to work in groups. On the other hand, the majority of introverts (80%) prefer to work alone, which is similar to their natural tendency toward solitary work. Furthermore, 75% of introverts claimed not knowing how to function in groups, while 50% believe they can only work efficiently alone. Only 40% of introverts are uncomfortable being evaluated in a group, which is less than extroverts in this way. Overall, the analysis indicates that introverts prefer solitary work due to a real preference and a lack of familiarity with group work, whereas extroverts' preference is primarily related to discomfort with group evaluation. These results can help teachers adapt and find solutions to address these various challenges in collaborative learning environments.

 Question 4: *"Do you prefer to have more collaborative learning activities in your courses?"*

Table 3.15:

Extroverts' and Introverts' Interest in Collaborative Learning Activities

	Extroverts	%	Introverts	%
Yes	26	89%	3	10%
No	6	54%	5	45%
Total	29	100%	11	100%

Figure 3.13:

Extroverts' and Introverts' Interest in Collaborative Learning Activities
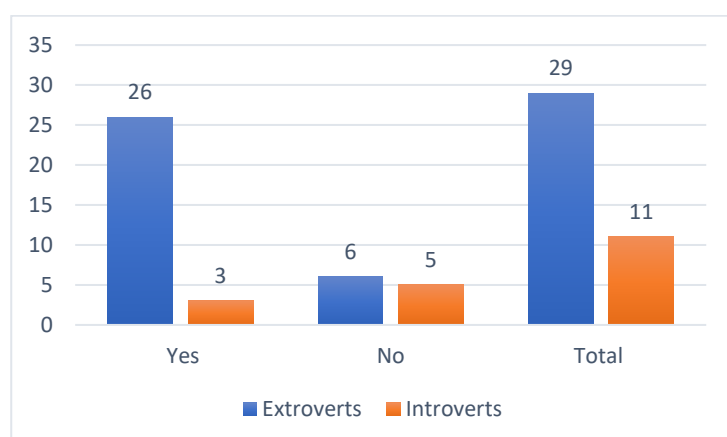
the data in Table 3.15 shows a significant difference between extroverts and introverts regarding their preference for more collaborative learning activities in their courses. Extroverts showed a strong desire (89%) for more collaborative learning, reflecting their natural preference for social interaction and group work. In contrast, only 10% of introverts favored more collaborative activities, and 45% stated that they do not want more collaborative learning in their courses. These results emphasize how the two personality types' have varied learning preferences: extroverts like interactive group environments, whereas introverts may prefer individual or less social learning settings. These findings indicate that course designs should balance collaborative and individual activities to meet the various needs of both extroverted and introverted students.

Question 5: *"How would you describe the process of working in a group?"*

Table 3.16

Students' description of the process of collaborative learning

	Extroverts	%	Introverts	%
Enjoyable	25	80.64%	0	0%
Not enjoyable	0	0%	55	55.55%
Annoying	2	6.45%	4	44.44%
Exciting	4	12.90%	0	0%
Total	31	100%	9	100%

Figure 3.14:

Students' description of the process of collaborative learning
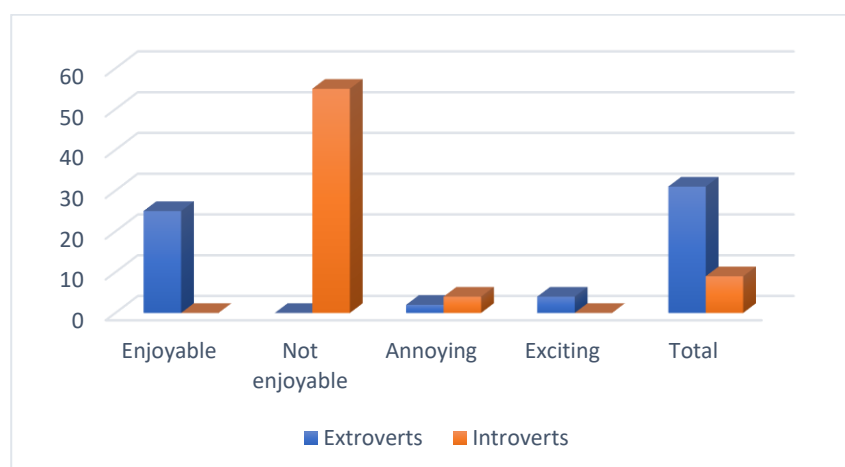
The results show that there is a clear difference between the two personalities concerning their experience of group work. The majority of extroverts (80.64%) find working in groups enjoyable and productive, and only 4 of them find it annoying. In contrast, 55.55% of introverts said it is not enjoyable, and four argue that it is an annoying experience. The data highlights a variety of opinions and attitudes toward collaborative learning in both personalities. Generally, extroverts prefer working in groups and find it a positive experience, whereas introverts tend to see group work in a negative view, either as annoying or not enjoyable at all. This highlights the importance of designing group activities that are

structured, balanced, and flexible, to meet the needs of both introverted and extraverted learners. The follow-up question shows the reasons for this description.

Table 3.17

The reason for the description of the process of group work

Reason	Extroverts	Introverts
Positive Experiences	-Enjoy working in groups is enjoyable and exciting, motivated to study and interact. - Group work improves study skills - Creativity during discussions - Sharing ideas - Helps discover different perspectives - Social connection and feedback - Makes learning fun and interactive - Learning from feedback and others' experiences.	Sometimes, group work is enjoyable when members are familiar. - Learning new ideas and perspectives. - Practicing English and language skills.
Negative Experiences	Unequal participation. - Dislike being a leader when others don't contribute. - Feeling annoyed when carrying most of the work alone. - Conflicts and disagreements - Stress when group dynamics are poor.	-Feeling stressed and anxious -Discomfort engaging in social activities - Unequal participation causes burden - Feeling annoyed when others don't listen or agree - Difficulty working with groups - Lack of group work skills.

Academic/Learning	- Learning from others' experiences - Sharing ideas improves understanding - Group work makes learning interactive and fun.	- Learning from others' perspectives - Gaining new information - Practice language skills. - Academic improvement through collaboration
Social/Emotional	 - Motivation and encouragement - Creates a positive social atmosphere - Sense of belonging and teamwork	-feeling uncomfortable or anxious - Less motivation - Preference of less interactive or more controlled environments.

The findings show a clear contrast between extroverts and introverts in terms of their experiences of group work. Extroverts find it a positive experience because they find it as an opportunity to improve study skills, share ideas, receive feedback, and engage with their peers in a supportive atmosphere. For them, teamwork is not only a method for enhancing academic learning but also a place to fulfill social and emotional needs by fostering a sense of belonging and encouragement.

In contrast, introverts tend to experience group work more negatively or with mixed feelings because of the stress, anxiety, and discomfort in social interaction and group dynamics. Moreover, Unequal participation and conflicts within groups are other factors that lead to frustration and feelings of burden. While introverts acknowledge the academic benefits of group work, such as learning from others' perspectives and practicing language skills, they generally prefer more structured groups. Their willingness to engage depends on the group cohesiveness and the opportunity to contribute in ways that others respect their personality type. The conditional or mixed views expressed by both groups highlight that the quality of the group dynamic significantly influences the experience. Extroverts thrive in dynamic groups directly, while introverts engage more when the environment is supportive and members are familiar.

This analysis suggests that while group work is beneficial academically but the social and emotional side impacts extroverted and introverted learners. Educators should design group activities that balance collaborative engagement and personality differences.

Section two: Student preferences for collaborative learning

Question 6*: "What type of group work do you prefer?"*

Table 3.18

Students' preferences of group work among extroverts and introverts

	Extrovert	%	Introvert	%
Small Groups	14	66.7%	6	31.6%
Pairs	5	23.8%	8	42.1%
Alone	2	9.5%	5	26.3%
Total	21	100%	19	100%

Figure 3.15

Students' preferences of group work among extroverts and introverts
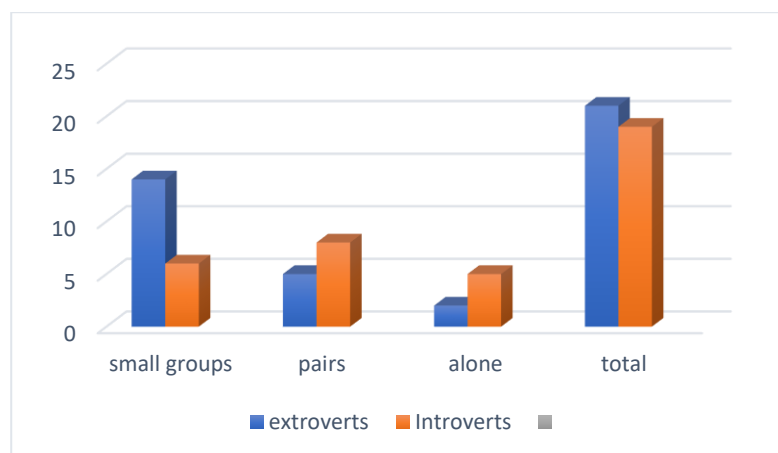
The findings of the table show the preferences of group work among extroverted and introverted learners. the majority (66.7%) of extroverts prefer working in small groups, which indicates their sociable and outgoing nature. A smaller percentage of extroverts (23.8%) favor working in pairs, while only 9.5% prefer working alone. In contrast, the table shows a variety of preferences among introverts. The majority of introverts prefer working in pairs (42.1%), followed by 31.6% who enjoy working in small groups. In the last place who prefer to work alone (26.3%). These results show a clear distinction between the two personality types.

Extroverts tend to favor larger social settings for group work, whereas introverts prefer smaller groups or solitary work environments.

Understanding these preferences helps teachers to create more effective and comfortable collaborative experiences tailored for each personality type.

Question 7: "*When working in a group, how do you usually behave?*"

Table 3.19

The Behavioral Tendencies of Extroverts and Introverts When Working in Groups

	Extroverts	**%**	**Introverts**	**%**
I follow others' ideas, but I participate	2	11.72%	15	65.2%
I contribute only when needed	0	0%	2	8.69%
I stay quiet and let others do the work	0	0%	3	13.04%
I take the lead and organize tasks	15	88.23%	3	13.07%
Total	17	100%	23	100%

Figure 3.16:

The Behavioral Tendencies of Extroverts and Introverts When Working in Groups
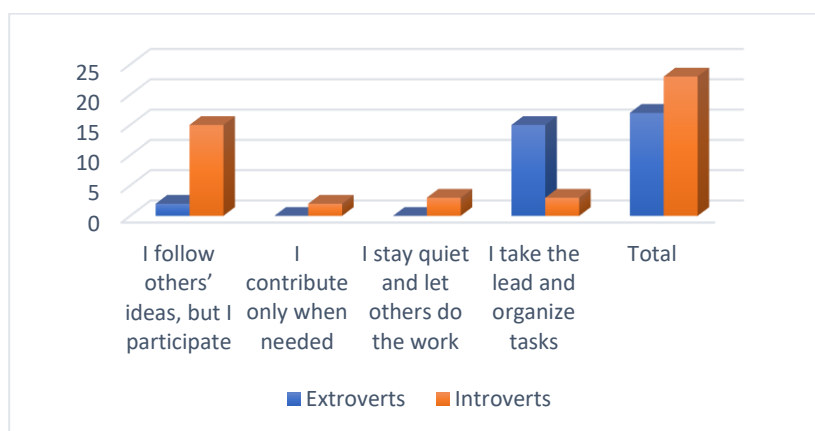
The results of the table show extroverts' and introverts' behaviours when participating in group work. Among extroverts, a dominant 88.23% take the lead and organize tasks, which indicates their natural inclination towards leadership and active involvement. Only 11.72% follow others' ideas but still participate in the group work, and none of them contribute and engage only when needed or stay quiet. In contrast, the majority of introverts (65.2%) tend to follow others' ideas but still participate, which indicates their preference for collaboration without dominating the group. Smaller percentages of introverts contribute only when necessary (8.69%) or stay quiet and let others do the work (13.04%). Additionally, only 13.07% of introverts take the leadership roles, not like extroverts. This data highlights how extroverts are more likely to assume leadership and actively engage in group activities, whereas introverts prefer supportive or less assertive roles within group settings. These data emphasize on the importance of recognizing personality differences in EFL classrooms to foster balanced and effective group work.

Question 8: "*Do you prefer structured group work (with assigned roles) or flexible group work (where roles are not defined)?*"

Table 3.20

Students' Preferences for Structured vs. Flexible Group Work Among Extroverts and Introverts

	Extroverts	**%**	**Introverts**	**%**
Structured group work	3	21.4%	15	57.69%
Flexible group	10	71.4%	2	7.7%
I do not prefer to work in groups	0	0%	5	19.23%
I have no preference	1	7.14%	4	15.4%
Total	14	100%	26	100%

Figure 3.17:

Students' Preferences for Structured vs. Flexible Group Work Among Extroverts and Introverts
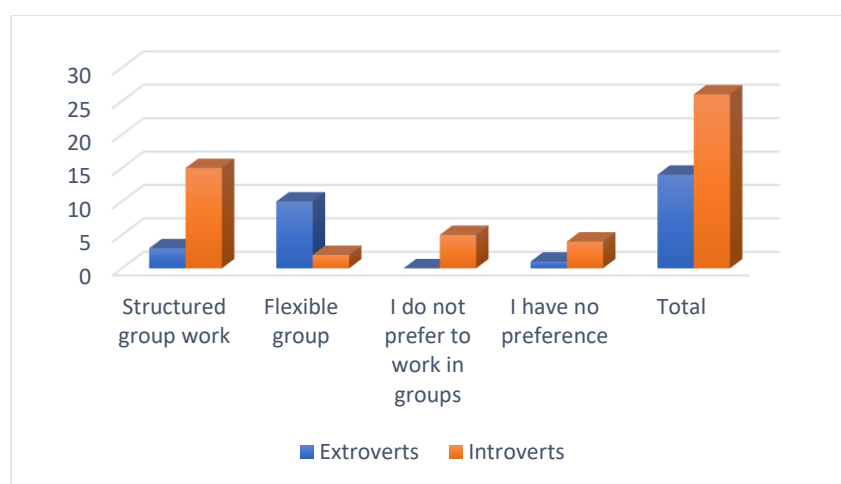
The findings in the table present a variety of preferences in group work between extroverts and introverts. The majority of extroverts (71.4%) prefer flexible group work where roles are not defined, where they are spontaneously engaging in social interactions. Only a small percentage (21.4%) of extroverts favor structured group work with assigned roles, and

a few (7.14%) reports having no preference. In contrast, introverts show a strong preference for structured group work, where 57.69% favor groups with assigned roles because structured group work provides them confidence and offers opportunities to practice language skills and can express and show themselves. Additionally,19.23% of introverts prefer not to work in groups at all, reflecting their preference towards solitary work or discomfort in group environments. The remaining percentage of introverts, 15.4%, have no preference between structured or flexible group work. the data results emphasize how personality influences comfort and effectiveness of group work formation, suggesting that structured groups are better related to introverts, while extroverts thrive in more flexible, dynamic group interactions.

Question 9*: "Which of the following collaborative learning strategies do you think are most effective?"*

Table3.21

Students' Preferences for Collaborative Learning Strategies Among Extroverts and Introverts

	Extroverts	%	Introverts	%
Think-pair-share strategy	5	20%	7	46.7%
Jigsaw strategy	4	16%	2	13.3%
Peer teaching strategy	5	20%	2	13.3%
Discussion circles	5	20%	2	13.3%
Problem-based learning strategy	3	12%	1	6.7%
I am not familiar with any of these strategies	3	12%	1	6.7%
Total	25	100%	15	100%

Figure 3.18:

Students' Preferences for Collaborative Learning Strategies Among Extroverts and Introverts
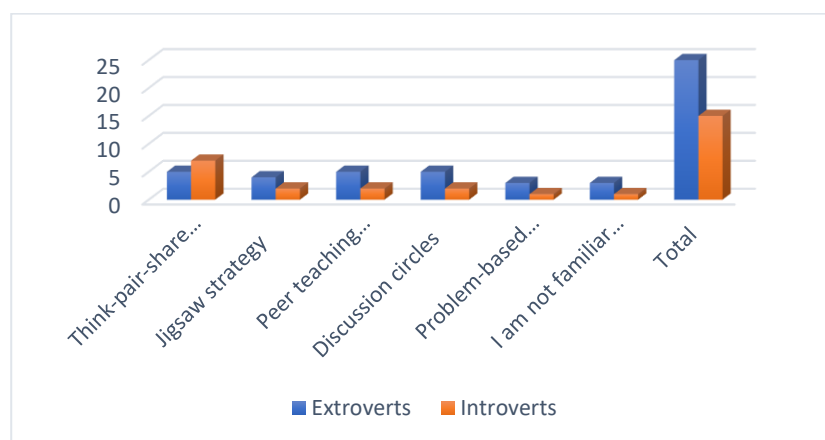
The results of question nine show the collaborative learning strategies preferred by both personalities preferred by both personalities. For introverts, the most preferred approach was *Think-Pair-Share*; it received 46.7% of responses. Introverts choose this strategy as it is a kind of structured learning with less pressure, allowing them to think first before sharing their ideas with their peers.

However, extroverted learners, from the responses, there is an even distribution among three different strategies, including: Think-Pair-Share, Peer Discussion, and Discussion Circles, each strategy getting 20%. These three strategies are favored by extroverts as they foster interaction, verbal engagement, and peer collaboration.

The Jigsaw and Problem-Based Learning *(PBL)* stand in the last place; they were less favored by both personalities. For the Jigsaw strategy: 16% of extroverts and 13.3% of introverts, whereas for *PBL*: 12% of extroverts and 6.7% of introverts. This suggests that these approaches need more intricate group dynamics or a greater degree of independence, which could be less attractive for those who prefer clearer roles and structured interactions. Finally, a small percentage of participants responded with their unfamiliarity with these strategies.

From these results, we understand that personality has a crucial role in shaping collaborative learning strategies. Introverts prefer strategies that offer personal and structured interaction, whereas extroverts lean towards strategies that foster communication and social interaction. This suggests the need for better training and awareness on these strategies in EFL

classes to ensure meaningful engagement in group work. Teachers should design activities to create a balance that can help maximize engagement and learning effectiveness across diverse student personalities.

Section Three: Students' challenges in collaborative learning

Question 10: "*What is the biggest challenge you face when working in a group? "*

Table 3.22

Student's Challenges Faced by Extroverts and Introverts When Working in Groups

	Extroverts	%	Introverts	%
Unequal participation (some members dominate, others stay quiet)	7	31.81%	11	61.11%
Group conflicts and coordination issues	10	45.45%	3	16.66%
I do not experience major challenges	5	22.72%	0	0%
Difficulty in expressing ideas	0	0%	4	22.22%
Total	22	100%	18	100%

Figure 3.19:

Students' Challenges Faced by Extroverts and Introverts When Working in Groups
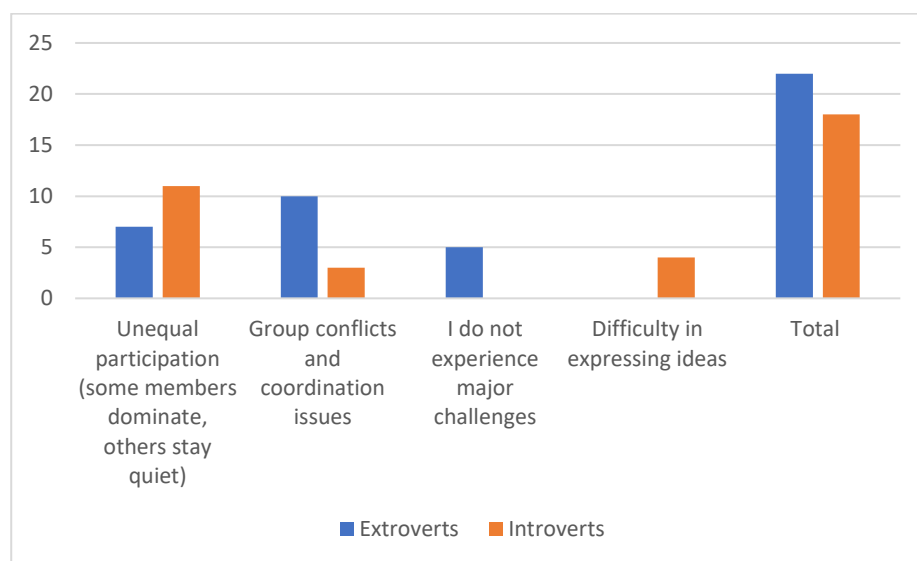
In this question, we asked students about the biggest challenges they face when working in a group, including a variety of challenges between extroverted and introverted learners. Among extroverts, the most common obstacles were group conflicts and coordination issues, selected by 45.45% of respondents. This emphasizes that while extroverted students are socially active, they also encounter difficulties in keeping the group in a balanced atmosphere Additionally, 31.81% of extroverts report that unequal participation is another issue faced in collaborative learning, also, 22.72% of extroverts stated that they do not experience major challenges when working in groups, this confirm that they have a positive experience toward collaborative work.

In the other hand, 61.11% of introverts highlighted "unequal participation" as their most frequent challenge encountered in these settings. This high percentage suggests due to their nature and personality type allow other members to dominate discussions while introverts remain passive and do not have the opportunity to participate in group work, which they feel overlooked or undervalued. Moreover, difficulty in expressing ideas is another major challenge faced by introverts. 22.22% of participants selected this option. introverts. Usually, the common struggle with verbal communication in group settings makes them feel shy and overwhelmed in such situations. Only a small percentage of introverts (16.66%) face group conflicts and coordination issues, and none of them claim they have no major challenges. Overall, introverts face obstacles in participation and communication barriers, whereas

extroverts face more challenges in interpersonal conflicts and group coordination. The findings emphasize the importance of designing collaborative activities that address both personality challenges to ensure balanced participation and improve group environments.

Question 11: *"To what extent do you feel anxious or uncomfortable when participating in group work?"*

Table 3.23:

Levels of Anxiety or Discomfort Experienced by Extroverts and Introverts During Group Work

	Extroverts	**%**	**Introverts**	**%**
Strongly agree	0	0%	1	4.54%
Agree	0	0%	12	54.54%
Neutral	9	47.39%	9	40.90%
Disagree	5	26.31%	0	0%
Strongly disagree	4	21.05%	0	0%
Total	19	100%	22	100%

Figure 3.20:

Levels of Anxiety or Discomfort Experienced by Extroverts and Introverts During Group Work
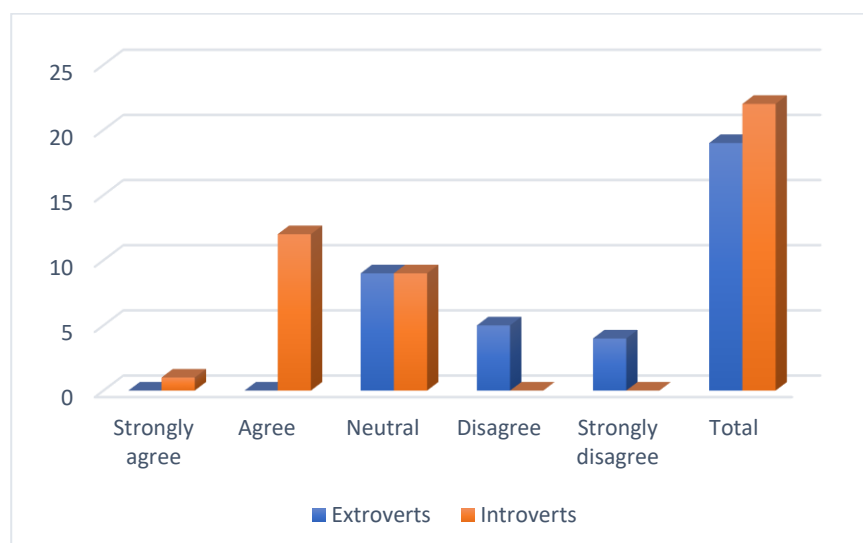
The answers to Question 11 provide a brief overview of the degree of participation in group work among extroverted and introverted learners. The results show a clear distinction between the two personalities. 59.08% of introverts reported feeling anxious or uncomfortable, with 54.54% agreeing and 4.54% strongly agreeing. An additional 40.90% chose a neutral response, while none disagreed; this indicates that the feeling of discomfort in group work is obvious among introverted learners. Compared to extroverts which none of them agreed to this statement because 21.05 % chose strongly disagree and 26.31% chose disagree, and 47.59% show their neutral responses towards this statement These results emphasize on creating collaborative learning environments that accommodate both personalities, which can help reduce discomfort and foster a more inclusive atmosphere for all personality types.

Question 12: "*Do you believe your personality type (extrovert/ introvert) affects your participation in collaborative learning tasks?*

Table 3.24:

Impact of Personality Type on Participation in Collaborative Learning Tasks

	Extrovert	**%**	**Introvert**	**%**
Yes	2	31%	9	2.61%
No	3	0.22%	8	0.88%
Total	23	100%	17	100%

Figure 3.21:

Impact of Personality Type on Participation in Collaborative Learning Tasks
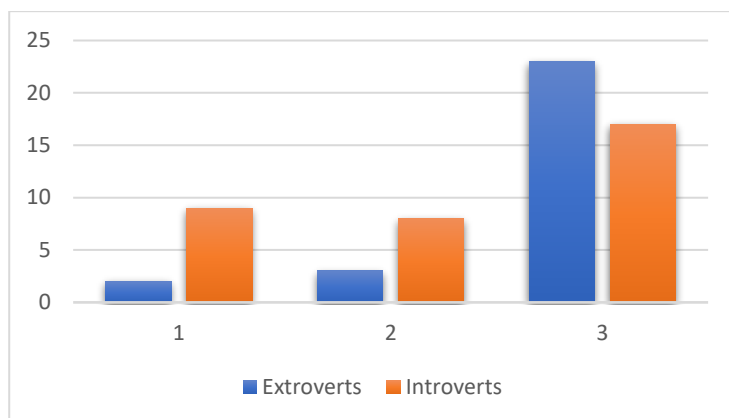
According to this question, the results show whether being an extrovert or introvert influences participation in collaborative learning tasks. The figure shows the majority of participants who answered with "Yes" (67.5%). These students emphasize that personality type has a strong relation to collaborative learning. While a small number of participants who answered (32.5%) "No, do not see a strong connection between personality and collaboration. The following question will show the reason why the personality traits, such as introversion and extroversion, affect participation in group learning, highlighted in the table below:

Table 3.25:

The reason why personality traits (extroversion and introversion) affect participation in collaborative learning

Reason	Introvert	Extrovert
Listening vs. Speaking	*"Because as an introvert, I tend to listen more and speak less, which can make me less vocal during collaborative tasks but more reflective and focused on quality contributions."*	"*Extroverts have an idea how to deal with different mindsets, so in collaborative learning we will meet different ways of thinking, so it will be easy to study with them."*
Comfort Level in Group Work	*"Because I'm an introvert, that makes it hard for me to engage easily in the discussion, and I put forward my ideas." / "As an introvert, I prefer activities that allow me to work alone or in quiet environments. Interacting with many people can be mentally tiring for me."*	*"Being an extrovert is a bit difficult because the others depend on you to work and plan things out." / "Extroverts tend to take more responsibility and be the connection between the other members."*

Preference for Work Style	*"Introverts may prefer working independently or in smaller groups, while extroverts often thrive in social settings and actively engage in group discussions." / "As an introvert, I prefer working alone or in quiet environments."*	*"Extroverts thrive in social settings and larger groups with dynamic interaction." / "I think in my opinion there is a difference between introvert and extrovert students; extroverts express their ideas even if it's incorrect without shyness or fear, while the other one, the opposite."*
Leadership and Participation	*"Even though Even though I'm an introvert somehow, I like to take the lead in group work and I know how to deal with each member and problem. The biggest challenge for me as an introvert is to face the audience as a leader of the group."*	*"Extroverts tend to take more responsibility and be the connection between other members." / "I like to take the lead in group work."*
Impact on Academic Performance	*"Most introverts prefer to work alone, and when they are obliged to do a group, they feel uncomfortable, which may negatively affect their academic performance."*	*"Because when you extrovert or introvert, this is affecting your performance." / "Active participation is generally seen as beneficial to academic success."*
Personality Influence on Participation	*"Yes, my introverted personality affects my participation, as I tend to listen more and speak less during collaborative learning tasks." / "Because as an introvert, I prefer listening and thinking before participating, which sometimes reduces my involvement".*	*"Personality plays an important role in collective learning tasks because it will affect the interaction between us." / "Extroverts tend to participate and negotiate with the group members rather than the introverts."*
Adaptability and Overcoming Challenges	*"Even though I'm an introvert, I like to take the lead in group work, and I know how to deal with each member and problem." / "Some introverts can adapt and participate more when necessary."*	*"Being an extrovert is a bit difficult because the others depend on you to work and plan things out." / "Extroverts tend to take more responsibility and be the connection between the other members."*

The table shows the students' opinions on why personality traits like extroversion and introversion affect their participation during group work. On one hand, introverts are less

speaking and listening more, which leads them to think well before thy produce the ideas and thoughts. they prefer smaller groups and solitary work where can participate without pressure or anxiety of social interactions, because when feeling discomfort affect their academic performance and motivation. Although these challenges some introverts believe that they can take leadership roles in and speak in public situation in front the audience. On the other hand, extroverts re more talkative and expressive. sharing their ideas and thoughts easily and are the ones who initiate group conversations. they usually take leadership roles and the one who control the group. Additionally, extroverts feel comfortable in group environments or in larger situations, they believe that their active involvement help them succeed in their studies. but extroverts feel pressure and responsibility when the group members rely on them to solve and organize the task. These results emphasize the importance of recognizing various personality types in collaborative learning environments to promote inclusive and effective group work.

Question 13: "*If given a choice, would you prefer working with students who share your personality (introverted/extroverted) or a mix of personalities?*"

Table 3.26:

Student Preferences for Group Composition Based on Personality Type (Introverted vs. Extroverted)

	Extroverts	%	Introverts	%
I prefer working with students who share my personality	6	25%	11	68.75%
I prefer a mix of personalities	15	62.5%	1	6.25%
I have no preferences	2	8.33%	2	12.5%
I prefer working alone	1	4.7	2	12.5
Total	24	100%	16	100%

Figure 3.22:

Student Preferences For Group Composition Based On Their Personalities (Introverted Vs. Extroverted)
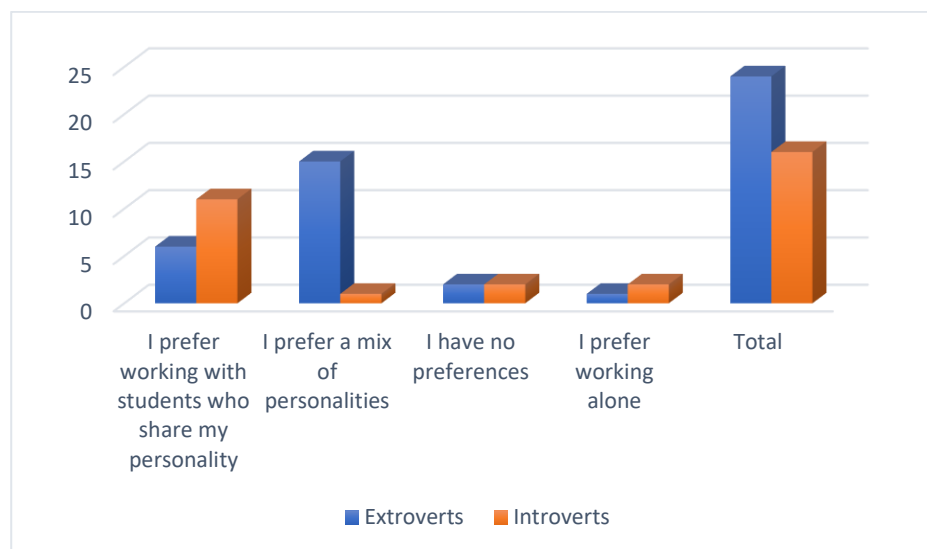
The analysis of Question 13 shows that students have varied preferences when it comes to group composition based on personality traits, especially extroverted and introverted learners. Among extroverts, the majority (62.5%) prefer working with a mix of personalities, which indicates that extroverts enjoy working in groups whose members do not share the same personality and can work well together. Only 25% of extroverts prefer working with students who share the same personality trait. The same for introverted students, who 68.75% also favor working with peers who share their personality type and feel comfortable similar mentality. Additionally, a small number of introverts (6.25%) prefer a mix of personalities. A small percentage of both extroverts and introverts expressed no preference or a preference for working alone; introverts lean more toward working alone (12.5%) compared to extroverts (4.7%). These findings highlight that both personalities differ in their preferences for group work. extroverts prefer diverse groups with a variety of personalities, while introverts favor more homogenous groups. this emphasizes how crucial to take individual preferences into account when planning groups in educational settings

Question 14: ***"In your opinion, how do introverted students feel compared to extroverted students experience of group work?"***

This question highlights several opinions regarding how introverted and extroverted students experience group work differently. The majority of responses suggest that introverted

students often feel anxious, shy, or uncomfortable in group settings. Many described introverts as hesitant to speak, easily overwhelmed by loud or large groups, and more comfortable working alone or in smaller, quieter environments. Some participants noted that introverts tend to listen more and analyse ideas deeply, but struggle to express themselves or engage actively in group discussions.

On the other hand, extroverted students were described as socially confident, enthusiastic, and expressive. They were seen as more adaptable to group dynamics, capable of participating in discussions, sharing ideas freely, and taking leadership roles. A few respondents even indicated that extroverts often dominate group work, which may lead introverts to feel ignored or less valued.

several responses acknowledged that both personality traits face challenges—extroverts may feel pressure to lead and perform, while introverts may feel insecure or disengaged. One participant mentioned switching between introversion and extroversion depending on the group dynamics, highlighting the fluidity of personality expression in different contexts.

There were also a few critical opinions suggesting that introverts might use their personality as an excuse to avoid participation, while others emphasized the need for understanding and balancing both traits to achieve effective collaborative learning.

Question 15: "*What strategies or methods help you facilitate group work?*"

This question illustrates various strategies students used to help them with effective group work. The results showed that the most commonly suggested strategy was role assignment and task division, with many respondents highlighting the importance of giving each member a specific responsibility, such as note-taker, presenter, or timekeeper, to ensure accountability and equal contribution. Communication and mutual respect were also emphasized as essential by encouraging open dialogue, listening to others' opinions, and creating an environment where every member feels heard and included.

Another strategy was organization and planning, which includes setting clear goals, deadlines, and writing a plan of action before starting. Also, flipped learning was recommended by some participants for introverts and peer-sharing techniques for extroverts. Several responses mentioned the value of digital collaboration tools like Google Docs and Trello, as well as techniques like debates, discussions, role plays, and gamification to make group work more engaging.

Other students highlighted the importance of small group sizes, flexibility, and time management. A few participants noted the need for understanding team members' strengths and weaknesses, allowing tasks to be matched with personality traits or skill sets for more effective collaboration. Although one or two respondents expressed negative experiences with group work, the majority recognized that clear structure, active communication, and respect for different working styles can greatly improve the group learning process.

3.6.2 The semi-structured Teacher's Interview

3.6.2.1 Description of the teacher's interview

To explore the influence of EFL learners' personality traits, particularly extroversion and introversion, on their perceptions and experiences of collaborative learning, a semi-structured interview was conducted with 6 EFL teachers from the Department of English at Biskra University. This qualitative data collection tool was designed to obtain in-depth insights from experienced teachers regarding how personality differences shape student engagement in collaborative learning contexts. The interview consists of nine open-ended questions, allowing teachers to share their professional observations and reflections on the current research.

To better analyze the collected data from the teachers' interviews, a thematic analysis method is chosen for this purpose. This technique is considered as one of the qualitative research methods; it involves recurring patterns or themes within qualitative data (Braun&Clarke,2006). We choose this analytical technique for our study in order to identify themes and patterns from the teachers' responses. The latter goes through six steps: First, familiarizing oneself with the data obtained. Then, transcribing all the obtained data into words and sentences. Next, generating initial codes by identifying important features of the data. Moreover, organizing these codes into themes and subthemes, followed by defining and naming the themes. Finally, writing the report. This analytical technique is suitable for this type of question and helps us in the research journey.

3.6.2.2 Validity And Reliability Of Teachers' Interview

In order to check the credibility of the teacher's interview, this instrument should go through two stages, which are called validating and piloting. First, the first draft of the interview was sent to the supervisor via email to check its face validity and evaluate whether the interview questions effectively capture all areas of the topic under investigation. In addition to that to make sure that the interview measures what it aims to measure. The

supervisor gives her opinion and suggests some modifications; these modifications are taken into consideration to administer the final draft in a well-representative version. After the interview was validated, it moved to the next stage, which is piloting. the interview was given to two EFL teachers to check it the questions are understandable and there is no problem when answering it.   These stages are important in research to test the tool's clarity and usability and ensure credibility and accuracy.

3.6.2.3 Analysis of Teachers' Interviews

Question 1: "*Do you believe that different personality traits, particularly extroversion and introversion, influence learners' participation in collaborative learning settings?"*

The first interview question used to explore teachers' beliefs regarding whether personality traits, particularly introversion and extroversion, influence learners' participation in collaborative learning contexts. The teacher's responses show a **n**eutral position regarding the role of personality traits in shaping learners' behavior during group activities. All six interviewed teachers declare that personality traits significantly affect students' engagement and interaction during collaborative learning. the majority of teachers argue that extroverted learners tend to be more socially expressive, while introverted learners are usually quiet and shy, which lead to variety in verbal contribution during the classroom as teacher A explained this distinction clearly in his saying: *"Extroverted students often thrive in social settings and are more likely to speak up, take initiative, and lead discussions. Introverted students may be more reflective and reserved, often preferring to listen, process information, and contribute in more deliberate or written ways."*

This perspective was reconfirmed by Teacher F, who stated the importance of personality variety in classroom management, particularly in oral tasks: *"One of the most challenging aspects about teaching, particularly oral expression, is that you will be dealing with different personalities. Some students are shy, some students are engaged... Others are very, very shy, and they tend to keep to themselves, so yeah, obviously it affects their participation."*

Some teachers offered brief and concise responses, their views were similarly aligned. Teacher B responded with a direct affirmation: *"Yes, definitely. And* others contextualized the matter in a philosophical perspective, stating: *"Each student represents an entity; in*

consequence, personality traits impact to great extent the learning process. "However, Teachers D and E also agreed without more explanation which they said, *"Yes, they do."*, *"Yes, of course."*

All these responses reflect a strong agreement that personality traits play a crucial role in how learners engage and participate with others during collaborative learning. The results support the idea that extroverts are verbally dominant the discussion which socially facilitates to them, but spontaneous engagement may be limited by introverts if it is not sufficiently supported. This highlights the importance of designing inclusive collaborative tasks that accommodate both personality types to accommodate both needs.

Question 2: ***"How do extroverted and introverted students typically participate in collaborative learning activities?"***

In this question, we ask teachers how extroverted and introverted students typically participate in collaborative learning activities. The majority of teachers agreed that the two personality types participate in different ways of engagement during group work. The extroverts were described as active, vocal, and confident participants who often lead discussions and easily interact with their peers. This idea is stated by teacher A, who said that extroverts "participate with high energy, are active, self-confident, express themselves freely with no fear," whereas introverted students "show no reaction, keep silent with rare contributions." However, Teacher B provided a somehow complex perspective, he said that while extroverts tend to "engage vocally, share ideas freely, and may take leadership roles," introverts prefer to "observe, process internally, and contribute after careful thought," often favoring smaller groups or written communication. This indicates that both types can contribute differently in group tasks. Concerning teacher C , who emphasized the importance of collaborative learning for introverted learners, noting that such activities are often "more useful for shy and introverted students" because they provide a quiet and safer space to leave their "fingerprints on a work" compared to more stressful individual tasks.

In contrast, teachers D, E, and F emphasized how extroverted learners naturally integrate in group work, as teacher D described introverts as "more passive and less engaging," while Teacher E stated that "extroverts tend to dominate the session, whereas the introverts should be urged to participate." But Teacher F simply noted, "Extroverts fit the collaborative learning activities."

The findings indicate that although the two personality types engage in distinct manners, well-structured collaborative learning environments can effectively accommodate the varied needs of learners.

Question 3: *"Have you noticed specific learning styles in introverted or extroverted learners when engaging in group work activities?"*

The third question of the interview seeks to determine whether teachers had observed specific learning styles associated with introverted or extroverted learners during group work activities. Most teachers highlight notable distinctions in learning styles between extroverts and introverts. Teacher A provided a comprehensive response, he said that extroverted students often favor "active, discussion-based, and kinesthetic learning styles," while introverted learners tend to prefer "reflective, reading/writing, or structured tasks." this teacher claims that these preferences influence the roles that students play in group situations, indicating that personality influences both learning orientation and involvement.

Similarly, Teacher C described extroverts as "active, motivated, collaborative, and competitive," whereas introverts were associated with "low participation" and an avoidance of leadership roles. Teacher D reinforced this comparison by pointing out that introverted students are more frequently "auditory and usually tend to write," but extroverted students share the different learning styles, which means they are generally adaptable.

These responses emphasize that introverts engage more comfortably in structured or solitary environments of group work, while extroverts prefer interaction and spontaneous tasks. Teacher E highlighted the value of "dividing tasks" to accommodate different learning preferences and balance contributions within mixed-personality groups.

In contrast, teacher F expressed the difficulty in identifying specific learning styles during group work, explaining that their primary focus as a teacher is on task completion rather than monitoring individual preferences: "I cannot think of a specific learning style there... it is hard for me as a teacher to monitor that." Despite this limitation, the majority of responses show that personality traits are generally associated with preferred learning styles, which affect how students interact with group projects.

These findings suggest the need for differentiated and flexible task design that accommodates the diversity in learning styles within collaborative learning environments.

Question 4: "*What challenges do students face when engaging in group work, and do these challenges differ based on their personality traits?*"

This question focused on identifying the challenges students face when engaging in group work and whether these challenges differ according to their personality traits. Teachers' stats a range of obstacles that are commonly faced during collaborative tasks.

For teacher A highlighted that "introverted students may struggle with being overshadowed or feeling uncomfortable speaking in large groups," while "extroverted students might dominate conversations or become frustrated with slower-paced collaboration." This indicates how differences in communication styles and comfort levels can lead to distinct group work experiences. Whereas teacher B listed common issues such as "effective collaboration, dispute of leadership, division of work," pointing to the interpersonal dynamics that often disrupt group cohesion. Similarly, teachers add these challenges, like "lack of communication and motivation, lack of a sense of teamwork, and time management." Such issues are influenced by personality traits, and "differ from one student to another." Another teacher reports "the lazy rely on the smart," which may reflect imbalanced participation regardless of personality. Meanwhile, Teacher F states that some students perceive group work as unfair: "Some of them feel that some of them are doing most of the work, and others are just leashing." This aligns with Teacher E's brief yet clear observation that "some students are [reluctant] to participate in group work," suggesting that unwillingness to engage may also be personality-related.

Altogether, the answers show that although collaborative learning has advantages, it is frequently accompanied by difficulties that can be influenced by the personalities of the students. the results emphasize the role of suitable group design, for equal role distribution to facilitate the teacher's instruction.

Question 5*: "How do you usually address these challenges to ensure balanced participation?*"

This question aimed to understand how teachers address the challenges associated with group work to ensure balanced participation among learners with varied personality traits. Most teachers indicated that they use strategies to create inclusive, structured, and motivating group environments. For example, Teacher A explains that he assigns roles to ensure equal participation, and use structure turn-taking, and incorporates both verbal and written tasks to accommodate different learner preferences. They also emphasized the benefit of small group

formats, which give introverted students a quieter environment to contribute comfortably. Teacher B use a motivational approach, stating that they address participation issues through the group assessment**,** announcing time limits**,** and actively encouraging discussion and engagement.

For teacher C favored the strategy of dividing tasks clearly among students to reduce confusion and ensure accountability. On the other hand, the teacher D offered a brief but affirmative response, saying: "Yes, I try to handle the situation," without specific details. Teacher E introduced a more holistic view, highlighting the importance of psychological awareness**,** gradual integration**,** motivational techniques**,** and avoiding personal designation, suggesting that both training and experience are essential for managing personality-driven group dynamics effectively. . Finally, Teacher F mentioned that in order to motivate and urge introverted learners to engage, they adopt a more individualized approach by speaking with them directly. These answers imply that although methods differ, most educators understand the need for deliberate tactics to guarantee equitable and inclusive group involvement. A common notion that balanced involvement necessitates both instructional design and interpersonal sensitivity is shown in the emphasis on varied roles, task clarity, motivation, and emotional support.

Question 6: "*Do you adapt your teaching strategies to accommodate students with different personality traits?"*

The final interview question explored whether teachers adapt their teaching strategies to accommodate students with different personality traits. Many teachers reported that they adjust their teaching methods to fit the personality types in their classes, especially with extroverted or introverted. Teacher A states that *"I use a mix of strategies such as think-pair-share, silent brainstorming, or rotating group formats,"* noting that these methods help him balance contributions to address diverse learner needs. Similarly, Teacher E highlighted the use of *"different methods of teaching... a variety of activities based on the different learning styles."* he used varied instruction to benefit learners with different personality-driven preferences. Teacher D emphasized more holistic group management by *"motivating tasks, decreasing stress, independence of members' selection and activities, and indirect teacher's feedback,"* suggesting that the emotional and social environment of the classroom is also a factor in adapting specific strategies. Teacher F acknowledged the difficulty of individual learning strategy, especially in larger classes, and is the major issue for him,but still noted, *"you find yourself adapting to the group, to the prevailing personality traits in the*

group,". Teacher C responded that they adapt based on group dynamics, assigning tasks depending on learners' strengths, stating, *"I assign what is difficult to the group and the simple tasks to the work ones."* Although Teacher B gave a brief response, *"Yes, I try to handle the situation,"* he still has a willingness to adjust strategies when needed.

These answers demonstrate that although total adaptation is not always feasible, particularly in larger classes, educators should actively work to adapt their teaching strategies to recognize and accommodate various personality types, which fosters a more inclusive learning environment

Question 7: *"Do you consider the preferred learning styles of students with different personal traits when planning collaborative activities?"*

In this question, we found that teachers mainly emphasize the intentional inclusion of diverse activity types to suit various learning styles. Teachers use discussions, writing, visual aids, and hands-on tasks to help students engage in ways that fit their preferences, whether they learn best visually, audibly, through movement, or by reflecting as teachers A said*"I aim to include a variety of tasks—discussion, writing, visual mapping, and hands-on activities— so each student can engage in a way that suits their style while also developing complementary skills."*. This method also helps students build additional skills rather than just relying on their strongest style.

Another key point is the practical constraint of classroom context, especially in large class sizes. Teacher D pointed out, *"Yes, to a certain extent, because crowded classes are very difficult to organize,"* and Teacher F admitted, *"No, it's very hard to consider them,"* illustrating that while the intent is there, full implementation is often hindered by logistical barriers. A third point is that teachers also consider students' broader needs and goals. As teacher B noted, *"Yes, not only learning styles but also needs, goals, and specific strategies that make them engage in the course easily and smoothly,"* suggesting a more comprehensive, student-centered approach to collaborative learning. Lastly, student motivation appears to be a driving factor for adapting to preferred learning styles, as teacher E stated simply, *"Yes, to motivate them."* highlighting the difficulty of meeting diverse needs in typical classroom setting.

Overall, while most teachers expressed a willingness to consider learning styles in relation to personality traits, but is often challenged by them due to time constraints, and class size, which need a equal implementation of strategies to ensure inclusive group work .

Question 8: *"From your perspective, how does collaborative learning benefit introverted and extroverted students?* **And** *what drawbacks might each group experience?"*

This question examined teachers' perspectives on how collaborative learning benefits both introverted and extroverted students and what the drawbacks each group might face. Most teachers emphasized that collaborative learning offers valuable opportunities for both personality types. Teacher A observed that *"extroverted students benefit from social engagement and leadership opportunities, while introverted students build communication confidence and learn from diverse perspectives."* However, they also noted that *"extroverts may overlook deeper reflection, and introverts may feel overwhelmed or unheard if the environment isn't structured thoughtfully,"* which emphasizes the need for inclusive group design.

Teacher F similarly emphasized the advantages for introverted learners, he said *"It gives them a chance to practice with a smaller group… they get to talk a little, they understand the lesson better than if they were on their own,"* such students may become overly dependent on small-group settings, which could hinder broader communicative development. Teacher B stressed the emotional benefit for introverts and extroverts during group work, explaining that *"these activities help them feel self-belonging to a group then to the whole class,"* however, extroverts experience "more positive features rather than drawbacks."

From another perspective, teacher C also emphasizes the importance of balance of personalities in that a *"careful balance of student personalities can create collaboration and mutual contribution,"* while the unequal participation and mismanagement in group work can lead to *"negative impact and cause many problems."* Teacher in the group work, stated further suggested that collaborative learning raises awareness of active roles without regard to the personality traits: *"They raise their awareness about playing active roles in their study regardless of their levels or traits."* Teacher E noted that motivation is another challenge of contribution during group: *"Some drawbacks can be the student's demotivation if his level is even low."*

Overall, teachers agreed that collaborative learning can serve as a powerful method to support language development and personal growth for both introverts and extroverts, but it a need to balance different personalities in groups and design tasks thoughtfully to ensure every student benefits.

Question 9: "*What strategies would you recommend to make collaborative learning more inclusive and effective for both introverted and extroverted learners?*"

The final question of the interview asked teachers about their suggested strategies for making collaborative learning effective for both introverted and extroverted learners. The responses show that teachers proposed various methods to make group learning more inclusive for both students' personality types.

Teacher A provided a comprehensive response, he emphasis on the use of structured roles *"structured roles, balance between verbal and written contributions, small-group or paired activities, and clear guidelines,"* ensure balanced participation and clear expectations. while also emphasizing the value of *"reflection time before discussions and peer feedback"* to ensure all learners feel engaged in the group work.

However, teacher B proposed a more powerful strategy focused on personal growth which is leadership roles for introverted learners as: *"Encourage the introverted students to be leaders of the group with the help of the extroverted ones,"* Teacher C highlighted the importance of strategies adaptation deepened on each situation explaining that *"strategies depend on the situation,"* he said that *"learner-centered approach"* as the most effective strategy fro both learners.

Teacher D did not emphasize on specific strategy; he suggested that teachers need to *"consider their level of accuracy, divide tasks, and treat them equally,"* to promote equity in collaboration of both personalities. Teacher E emphasized the flexibility of methods, stating, *"Sometimes peer learning would be better, sometimes individual work is the best strategy,"* depending on learners' personalities and needs. Lastly, Teacher F expressed a desire for his own group formation management through his saying, *"I like to define the group randomly. I like to create my groups because it will be more effective,"* indicating the teacher's role in structuring group composition to maximize effectiveness.

These different but complementary strategies show that all teachers want to make a collaborative, inclusive space to fulfil each student's unique personality, in order to increase engagement, participation, and overall learning outcomes.

3.7 Discussion And Synthesis Of The Findings

The findings of this study have provided a deep understanding of how personality traits, especially extroversion and introversion, affect EFL learners' perceptions, preferences, and experiences during collaborative learning. The results from both the student questionnaire and teacher interviews indicate that personality traits play a crucial role in determining how students interact, engage, and participate in group settings. The questionnaire responses show that extroverts prefer flexible, dynamic group work. their natural sociability allows them to dominate group discussions and lead them to act as group leaders, where they freely express themselves and communicate with their peers without hesitation or fear. they prefer collaborative activities like peer teaching, discussion circles. However, introverts tend to favor small, quiet groups with structured tasks. they prefer group strategies like the think-pair-share strategy, which provides them a space and opportunity to participate effectively in a comfortable way.

Despite these differences, both personalities show the distinct value of collaborative learning as a teaching method in educational settings in fostering communication, motivation, and sharing ideas. Extroverts and introverts face difficulties and challenges which in their group learning. Anxiety, feeling abounded and overlooked, and active participation issues in large groups are the most common challenges introverts encounter in collaborative learning. Whereas, the unmotivated peers, group organization issues make extroverts suffer in such settings. In this case, teachers emphasize through their observations on the importance of intervening directly through structured roles , group mixed personalities, and task balancing (between oral and written tasks) to ensure fair and equal participation in the group. Teachers also stress on student-centred approach and a flexible approach. They argue that there is no specific learning strategy that suits all the needs of all students. Sometimes working alone or with peers is appropriate for them, depending on the learning situation.

To conclude, the data show that while collaborative learning can benefit all students, its success depends on how well it is tailored to different personality traits. This emphasizes the crucial role of teachers in designing group activities aligned with the needs of both

personalities and taking their students' personality learning preferences into account for successful and effective collaborative learning in EFL environment.

3.8 Summary of the results

The study's findings demonstrate how personality traits, particularly extroversion and introversion, significantly influence how third-year EFL students at Biskra University view and engage with collaborative learning. The results showed that extroverted students prefer active roles, open conversations, and flexible group structures and are generally more at ease in collaborative environments. On the other hand, introverted students frequently feel uncomfortable in group settings and show a clear preference towards structured assignments, smaller groups, or working alone or in pairs. Despite these variations, both groups recognized the educational advantages of group learning, including increased communication skills, motivation, and knowledge sharing. However, extroverts were more likely to experience problems with peer accountability and group coordination, whereas introverts were more likely to report emotional difficulties like anxiety and feeling ignored. In order to support diverse learners, teachers emphasized the significance of modifying classroom strategies, such as assigning roles, mixing personality types, and providing flexible formats. They also confirmed that personality has a significant impact on students' participation in group activities. In order to improve student engagement and learning outcomes, the study emphasizes the significance of creating inclusive, collaborative learning environments that are suitable to individual personality differences.

3.9 Conclusion

In conclusion, Chapter Three presented the methodological framework and detailed analysis of the data collected from third-year EFL students and teachers at Biskra University, aiming to explore the influence of personality traits—extroversion and introversion—on students' perceptions of collaborative learning. The qualitative approach was used, through questionnaires and interviews, which provided rich insights into how personality differences shape learners' preferences, behaviors, and challenges in group settings. The results showed clear distinctions between extroverted and introverted students in terms of group participation, emotional responses, and preferred collaborative strategies. Teachers also confirmed the impact of personality on classroom interaction and proposed several strategies to accommodate both personality types. Overall, the chapter highlighted the need for inclusive

teaching practices that acknowledge and adapt to students' personality differences to ensure effective and equitable collaborative learning experiences.

General Conclusion

This study aimed to investigate how the personality traits of third-year EFL students at Mohamed Kheider University of Biskra (extroversions and introversion) influence their perceptions, preferences, and attitudes in their collaborative learning contexts. as a result, collaborative learning (CL) was examined as a pedagogical strategy to promote engagement, language development, and social interaction in EFL settings. The thesis was structured into three main chapters. Chapter One introduced the concept of collaborative learning, discussing its origins, principles, and practical applications in the classroom. It also highlighted the benefits

of CL for both students and teachers. Chapter Two focused on personality traits, with a particular emphasis on introversion and extroversion, exploring how these individual differences influence learners' behavior and performance in group settings. It also reviewed some psychological theories related to personality and learning. Chapter Three is the fieldwork, research design, and data analysis, in which a qualitative approach was adopted, using both a student questionnaire and teacher interviews to collect in-depth data about the influence of personality traits, especially extroversion and introversion on collaborative learning.

The findings showed that the majority of the students were familiar with or had prior experience in collaborative learning. Their preferences, perceptions, and levels of engagement were strongly shaped by their personality types. Extroverted students tend to favor group work, take leadership roles, and thrive in socially dynamic environments. In contrast, introverted students often favored structured formats, smaller groups, or individual work. Teachers acknowledged these personality differences and highlighted on using strategies such as assigning specific roles, monitoring participation, and mixing personalities to tackle all learners' needs in collobrative learning.

In conclusion, the results emphasize on the idea that personality type plays a crucial role in shaping students' collaborative learning experiences. They also reported the need for inclusive, varied teaching methods that cater all students' personality traits to promote equal engagement in the classroom. The study highlights the teacher's responsibility in designing flexible, student-centered, collaborative tasks that accommodate diverse personalities and

learning preferences. These findings offer valuable insights for educators, curriculum designers, and researchers aiming to enhance the effectiveness of collaborative learning especially in EFL contexts by recognizing and addressing the needs of both introverted and extroverted learners.

Limitations of the Study

Some constraints were faced in this study. First, the study was conducted with a small sample size, which may not fully represent the broader population of EFL learners. A larger sample for more generalizable results and deeper insights into the relationship between personality traits and collaborative learning is recommended. Second, one major challenge faced during conducting this study is the lack of access to authentic and primary sources, especially in the theoretical part of the chapter of personality traits. The process of searching for reliable academic sources, including books and scholarly articles, the process took considerable time. This limitation reduced the richness and theoretical support of some sections of the study. Additionally, in open-ended questions, students and teachers gave incomplete responses. whether participants skipped questions or provided incomplete answers, or did not provide justifications for their answers. This may be due to a lack of seriousness since the questionnaire was distributed electronically via Google Forms, which affected the reliability of the data collected. Moreover, the study was also limited by the lack of classroom observation or performance-based data. It focused only on learners' self-perceptions of collaborative learning without comparing these with their actual behaviors in group settings. Despite these limitations, the study still provides important insights into how personality traits may influence EFL learners' perceptions of collaborative learning.

Future Recommendations

Based on the research findings, the study shows how personality traits (extroversion and introversion affect learners' perception of collaborative learning. it suggests pedagogical recommendations and future directions in order to enhance the effectiveness of collaborative learning to support both personality types in Algerian context specifically at Biskra university.

First of all, teachers have to be aware of the students' needs and interests to create teaching methods and an inclusive learning environment. Thus, designing collaborative tasks that consider students' personality traits to ensure balanced participation among learners. Second, a great teacher looks beyond academic performance (names and grades), they observe

how students interact, learn and feel in different learning situations. Understanding their personalities not only enhances learning outcomes but also student well-being. Teachers can also use standardized tests and questionnaires like the Big Five Inventory (BFI), MBTI, or HEXACO Personality Inventory, informal self-assessment... to help them know the students' personalities to design collaborative learning strategies algins with learners needs. Classroom observation is another solution to identify personalities for example who speaks more, who prefers working alone, who engages in group interaction …or directly interact with students to better understand their working styles and participation preferences. Moreover , educators have to divide student's groups thoughtfully in the classroom to avoid contrasts which may affect their collaboration. Based on student's personalities teachers can assign variety of learning tasks such as individual projects, pair work, open group discussion to support diverse learners.

Furthermore, students also are recommended in this study as they need to develop their Self-Awareness about their personality traits, knowing whether they are more introverted or extroverted can help them choose roles in group work that align with their strengths. Additionally, Introverted students are encouraged to participate gradually by engaging in structured and reflective collaborative tasks before moving to more dynamic roles, whereas Extroverted students are advised to promote inclusive participation by giving space to quieter peers and encouraging group balance. All students have to see collaborative learning as an opportunity to strengthen their communication, teamwork, and problem-solving skills, regardless of personality.

Finally, Educational authorities should offer Training Workshops that train teachers to recognize and adapt to diverse personality traits in the classroom, especially when designing and assessing collaborative activities.

To sum up , addressing personality differences in collaborative learning specially in the EFL context can significantly enhances student's participation , group interaction and overall classroom well being .

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Appendices

Appendix A: Students' questionnaire

Appendix B: Teachers' interview

Students' Questionnaire

Dear Third-Year Students,

   You are kindly requested to complete this questionnaire, which serves as a data collection tool for the accomplishment of a Master's dissertation. We directed the questionnaire to" explore the Influence of EFL Learners' Personality Traits on Their Perceptions of Collaborative Learning".

   Your responses will provide valuable insights, so please answer as **honestly** and **accurately** as possible. There are no right or wrong answers—we are simply interested in your personal experiences and opinions. Your participation is **voluntary** and **anonymous**, and your responses will be used for research purposes only.
   Would you Please tick (✓) the appropriate box or provide your answer whenever it is possible;
         Your contribution is greatly appreciated. Thank you for your time!
Prepared by: ZABI Soumia
Supervised by: MERGHEMI. K
University of Biskra

Part One: Personality Traits (BFI-2) (Extroversion – Introversion)

*Please indicate the extent to which you **agree** or **disagree** with each statement by selecting the appropriate option.

1. I enjoy participating in group discussions in class

   ○ Strongly Disagree ○ Disagree ○ Neutral ○ Agree ○ Strongly Agree

2. I prefer working alone rather than in a group

   ○ Strongly Disagree ○ Disagree ○ Neutral ○ Agree ○ Strongly Agree

3. I feel energized when interacting with my classmates

   ○ Strongly Disagree ○ Disagree ○ Neutral ○ Agree ○ Strongly Agree

4. I am comfortable expressing my thoughts in front of others

   ○ Strongly Disagree ○ Disagree ○ Neutral ○ Agree ○ Strongly Agree

5. I tend to keep my opinions to myself during group work

   ○ Strongly Disagree ○ Disagree ○ Neutral ○ Agree ○ Strongly Agree

6. I find it easy to start conversations with new classmates

   ○ Strongly Disagree ○ Disagree ○ Neutral ○ Agree ○ Strongly Agree

7. I enjoy social interactions in learning environments

   ○ Strongly Disagree ○ Disagree ○ Neutral ○ Agree ○ Strongly Agree

8. I feel more comfortable listening than speaking in group activities

○ Strongly Disagree ○ Disagree ○ Neutral ○ Agree ○ Strongly Agree

Part two: Section One: Students' Perceptions of Collaborative Learning

1. Do you have an idea about what collaborative learning?
☐ Yes
☐ No
2. Have you previously studied in a collaborative learning environment?
☐ Yes
☐ No
3. Do you prefer working in groups or individually?
☐ In groups
☐ Individually (if selected, please explain)
* If you selected "individually ", what is the main reason you prefer to work individually?
☐ I prefer to work alone
☐ I don't know how to work in groups
☐ I feel uncomfortable being evaluated in a group
☐ I can only work effectively on my own
4. Do you prefer to have more collaborative learning activities in your courses?
☐ Yes
☐ No

5. How would you describe the process of working in a group?
☐ annoying
☐ not enjoyable
☐ Exciting
☐ Enjoyable
Why?

…………………………………………………………………………………………………
……………………………………………………………………………………………….

Section two: Student preferences for collaborative learning

6. What type of group work do you prefer?
☐ Pair work (two students)
☐ Small groups (3-4 students)
☐ Large groups (5+ students)
☐ I prefer working alone.
7. When working in a group, how do you usually behave?
☐ I take the lead and organize tasks.

☐ I follow others' ideas, but I participate.

☐ I contribute only when needed.

☐ I remain quiet and let others do the work.

8. Do you prefer structured group work (with assigned roles) or flexible group work (where roles are not defined)?

☐ Structured group work (clear roles help me contribute better).

☐ Flexible group work (I prefer choosing my role naturally).

☐ I don't have a preference.

☐ I prefer not to work in groups.

9. Which of the following collaborative learning strategies do you think are most effective? (Choose all that apply)

☐ Think-Pair-Share (Discussing ideas with a partner before sharing with the group)

☐ Jigsaw Learning (Each student learns and teaches a different part of a topic)

☐ Peer Teaching (Students take turns explaining concepts to each other)

☐ Group Investigations (Students research and present a topic together)

☐ Discussion Circles (Small groups engage in in-depth topic discussions)

☐ Problem-Based Learning (Groups work together to solve real-world problems)

Section three: Challenges and personality influence in collaborative learning

10. What is the biggest challenge you face when working in a group?
☐ Difficulty expressing my ideas.
☐ Unequal participation (some members dominate, others stay quiet).
☐ Group conflicts and coordination issues.
☐ I don't experience major challenges.
11.To what extent do you feel anxious or uncomfortable when participating in group work?

☐ Strongly Agree

☐ Agree

☐ Neutral

☐ Disagree

☐ Strongly Disagree

12. Do you believe that your personality type (introvert /extrovert) affects your participation in collaborative learning tasks?
☐ Yes
☐ No

*If yes, please explain how?

…………………………………………………………………………………………………

    …………………………………………………………………………………………………

    …………………………………………………………………………………………….

13. If given a choice, would you prefer working with students who share your personality (introverted/extroverted) or a mix of personalities?

☐ I prefer working with students who share my personality.

☐ I prefer a mix of personalities.

☐ I have no preference.

☐ I prefer working alone.

14. In your opinion, how do introverted students feel compared to extroverted students' experience of group work?

…………………………………………………………………………………………………

………………………………………………………………………..

15. What strategies or methods help you facilitate group work?

…………………………………………………………………………………………………

Thank you for your participation

Teachers Interview

As part of this research study, the following interview questions aim to explore teachers' perspectives on how students' personality traits influence their experiences with collaborative learning. Since students have diverse personalities, understanding their behaviors, challenges, and preferences in group work is essential for creating inclusive learning environments.

*This interview seeks to gather insights on:

1. How students with different personality traits (e.g., introverts vs. extroverts) engage in collaborative tasks.

2. The challenges they may face and how teachers address them.

3. The benefits and limitations of collaborative learning for various personality types.

4. Strategies teachers use or recommend to make group work more effective for all students.

By **answering the following questions,** teachers will provide valuable input that will help identify ways to improve collaborative learning approaches in EFL classrooms, ensuring that all students, regardless of their personality traits, can participate and benefit effectively.

1. Do you believe that students with different personality traits, particularly extroverted and introverted learners, influence their participation during collaborative learning?
....
....

2. Have you notice how extroverted and introverted students typically participate in collaborative learning activities?
....
....

3.have you specific learning styles when engaging in group work?
....
....

4. What challenges students face when engaging in group work, and do these challenges differ based on personality traits?
....
....
....

5 .How do you usually address these challenges to ensure balanced participation?
....
....
....

6. Do you adapt your teaching strategies to accommodate students with different personality traits in collaborative learning activities?
....
....
....

7. Do you consider their preferred learning styles of students with different personality traits when planning collaborative activities?

....
....
....

8. From your perspective, how does collaborative learning activities benefit introverted and extroverted students differently? And what drawbacks might each group experience?

....
....
....

9. What strategies would you recommend to make collaborative learning more inclusive and effective for both introverted and extroverted?

....
....

الملخص

تبحث هذه الدراسة في كيفية تأثير السمات الشخصية لمتعلمي اللغة الإنجليزية كلغة أجنبية، وتحديدا الانبساط والانطواء، على تصوراتهم للتعلم التعاوني (CL). يعتبر التعلم التعاوني أحد طرق التدريس الفعالة في سياق اللغة الإنجليزية كلغة أجنبية نظرًا لفوائده العديدة في فصول اللغة. تعتمد الدراسة منهجًا مختلط الأساليب باستخدام أداتين رئيسيتين: استبيان شبه منظم تم إجراؤه على أربعين طالبًا من طلاب اللغة الإنجليزية كلغة أجنبية في جامعة بسكرة، ويتكون من اختبار الشخصية، وهو مزيج بين الأسئلة المغلقة والمفتوحة، ومقابلات شبه منظمة أجريت مع ستة مدرسين للغة الإنجليزية كلغة أجنبية في جامعة بسكرة. وكشفت النتائج أن السمات الشخصية تؤثر على تفضيلات الطلاب وسلوكياتهم والتحديات التي تواجههم في إعدادات التعلم التعاوني. أكد المعلمون على أهمية تكييف الاستراتيجيات التعاونية لتعزيز المشاركة والمشاركة بين المتعلمين المنفتحين والمنطويين، مثل تعيين أدوار منظمة، وموازنة المهام، وتجميع الطلاب ذوي السمات الشخصية المتنوعة. يهدف هذا البحث إلى فهم تصورات المتعلمين المنفتحين و الانطوائيين و تفضيلاتهم و التحديات التي يواجهونها عند العمل في مجموعات لتطوير بيئات تعليمية تعاونية أكثر شمولاً وفعالية لطلاب اللغة الإنجليزية كلغة أجنبية ذوي السمات الشخصية المختلفة .

الكلمات المفتاحية :متعلمو اللغة الإنجليزية، السمات الشخصية، الانبساط، الانطواء، التعلم التعاوني