

Perceptions of Collaborative Learning among Moroccan EFL Students: Examining Gender Differences

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Abstract

Several studies have explored university students' perceptions of collaboration and the influence of gender on those perceptions. However, little is known about students' collaborative learning (CL) perceptions and gender differences among English as foreign language (EFL) high school students, especially in the Moroccan context. Therefore, while exploring Moroccan EFL high school students' perceptions of collaboration, the current study also examines the extent to which gender differences exist in their overall perceptions. To achieve these objectives, the study adopts a comparative cross-sectional survey research design and uses a questionnaire to collect data from 150 public high school second-baccalaureate science students in Casablanca using convenience sampling. Analyses were performed through descriptive and inferential statistics, revealing that participants hold a generally positive perception toward collaboration. No statistically significant difference was observed in this sample between the perceptions of male and female students, and a small effect size was found. These results suggest that collaborative work is a valuable pedagogy among both male and female students in the Moroccan EFL high school setting. Several implications for students, teachers, and policymakers are discussed.

Keywords: collaborative learning, Moroccan EFL students, perceptions, gender differences, public high school

1. Introduction

In today's world, especially with the advent of advanced artificial intelligence tools such as ChatGPT, education is occupied not only with how to teach and learn effectively but also with what to teach. Therefore, equipping learners with critical thinking skills to distinguish credible information from biased ideas is now more necessary than ever. In light of the rapid changes in technology, science, and everyday life, finding appropriate solutions to problems requires not only individual effort but also collective effort for effective management. Thus, collaborative learning (CL) has been identified as a 21st-century competency that can significantly enhance students' critical thinking capacity (He et al., 2023; Xu et al., 2023).

Because teacher-centered approaches often train students to memorize information, teachers should limit their use and, instead, implement more collaborative learning strategies (El Baghdadi et al., 2024; UNESCO Institute for Lifelong Learning, n.d.). Group discussions and peer feedback can train students to think critically about diverse issues, fostering their ability to withhold judgment and make well-reasoned and informed decisions (Peng & Storch, 2025). Additionally, when students engage in productive group work in an English language classroom, they can enhance their language fluency and accuracy through collaboration and discussion (Abdeta et al., 2026). Moreover, in collaborative learning environments, learners' motivation and engagement can increase substantially (Chan et al., 2024). Hence, facilitating interactions among learners is important for their learning engagement and autonomy.

Collaborative learning has been defined in both broad and specific ways. From a general perspective, it has been regarded as a philosophy of interaction and personal lifestyle in which individuals appreciate other people's contributions and assume responsibility for their actions (Yang, 2023). It has also been specifically defined as a pedagogical approach in which learners of different performance levels jointly complete a task, address a problem, or produce a text in small groups (Slavin, 2014). According to Esmail Nejad et al. (2022), collaboration can be viewed as a social and affective learning strategy. For the purposes of the current study, collaborative learning refers specifically to students working in groups to support one another during their EFL classes.

With the advent of the humanistic approach to teaching over the last three decades, collaboration emerged as a powerful, student-centered approach that aims to meet students' diverse needs. The pedagogy has transformed students into active learners by supporting their engagement, satisfaction, performance, and growth (Güngör et al., 2026). In view of the humanistic approach to education, considerable studies at the international level have explored

the importance of collaboration from students' standpoints, including in English language learning, showing an overall optimistic perception (e.g., Al-Malki et al., 2022; Effendi & Wijirahayu, 2024; Normawati et al., 2023). Others have been undertaken to illuminate the significance of student-related factors in students' learning perceptions; gender is one of them. Cultivating awareness among EFL teachers of how gender dynamics can shape students' learning perceptions is crucial, as it helps them adapt appropriate teaching strategies to meet students' preferences and reduce gender inequalities in learning outcomes.

Gender has been shown to substantially shape students' perceptions in English language learning. Accordingly, numerous studies suggest that female students have significantly more positive perceptions toward English language learning than male students across different school levels and countries (e.g., As Sabiq et al., 2021; Aswad, 2022; Yu, 2025). This topic has been further explored in the context of collaborative learning at the international level. Interestingly, several studies indicate that females show a higher perception of collaboration across different courses, including English language learning (Ali, 2017; Baena-Morales et al., 2020; Deveci, 2018). Nonetheless, there is a dearth of research not only on students' perceptions of collaboration but also on the role of gender in shaping those perceptions within the Moroccan EFL high school setting. Therefore, while exploring Moroccan EFL public high school students' perceptions on collaboration, the current study also examines gender differences in those perceptions. Given the increasing importance of collaborative learning in education at the international and local levels, the present study will provide important insights into the value of this pedagogy in the Moroccan EFL context. Consequently, the two following research questions guide the current study.

1.1. Research Questions

The following are the main research questions.

- **RQ1:** What perceptions do Moroccan public high school students hold toward their group work experience in EFL classes?
- **RQ2:** Is there a statistically significant difference in female and male students' perceptions toward their group work experience in EFL classes?

1.2. Research Hypotheses

Based on the second research question and the reviewed literature, the present study puts forward the following hypotheses:

- **H1.** There is a statistically significant difference in female and male students' perceptions toward their group work experience in EFL classes.
- **H0.** There is no statistically significant difference in female and male students' perceptions toward their group work experience in EFL classes.

2. Literature Review

2.1. Theories Supporting Collaborative Learning

One of the important questions educators face in their classrooms is how best to help students learn the material and improve their learning outcomes. Social constructivism, social cognitive learning, and self-determination theories have addressed the question from different angles, contributing to the discussion around what shapes students' development, behavior, and learning.

Social constructivism emphasized the crucial role of the social environment in shaping thought, learning, and development (Vygotsky et al., 1978). Its pioneer, Lev Vygotsky, maintained that students' higher cognitive processes are activated only when they interact with more knowledgeable peers through language, scaffolding one another's learning within the Zone of Proximal Development (ZPD) (Ertugruloglu et al., 2023). Vygotsky particularly highlighted that thought first occurs within social interactions before it is internalized. Although social constructivism underestimates the role developmental stages can play in shaping students' capacity for learning and thought (Piaget, 1959), it provides students with the opportunity to share the workload, develop higher-order thinking skills, and improve learning engagement.

Complementing social constructivism, the social cognitive learning theory underscored the significance of human interactions, self-efficacy, and motivation in learning (Bandura, 1986). According to the theory, students learn by observing others' behavior and its consequences. However, learning in this way also depends on the extent to which the observing students are motivated and hold positive beliefs about their ability to learn (Schunk & DiBenedetto, 2020). The importance of self-efficacy and motivation is further emphasized by the more contemporary framework of self-determination. The theory suggests that, for students to become intrinsically motivated, they should satisfy three needs: relatedness, autonomy, and competence (Ryan & Deci, 2000). Collaborative learning environments can effectively help students meet these needs by fostering meaningful connections and a sense of belonging, thereby encouraging them to accept different opinions and allowing them to express their thoughts, become active learners, and acquire new skills.

In light of this integrated theoretical lens, collaborative learning activities provide more opportunities for students to interact, learn from one another's mistakes and successes, and take responsibility through scaffolding, observation, and modeling. Recent research supports this by showing that peer interactions are important for students' higher-order thinking, self-efficacy, and sense of belonging (Ooi & Cortina, 2023; Wang et al., 2023). Therefore, the three theories constitute a comprehensive perspective that explains the significance of collaborative learning in developing students' learning at the cognitive, behavioral, and affective dimensions.

2.2. Social Role Theory: Accounting for Gender Differences in Collaborative Learning

Many studies suggest that female students outperform male students in collaborative learning milieus in terms of perception and performance (Feng et al., 2023; Puiggalí et al., 2023). These gender differences in collaborative learning settings may be more closely linked to affective (e.g., affective-learning strategies) and cognitive factors (e.g., memory) than to contextual factors (Almashour & Davies, 2023; Halpern, 2000). In support of this, Gilligan (1982) argues that females tend to seek connection, while males are more likely to seek achievement and independence.

However, according to social role theory, females are more socialized to cooperate and express themselves verbally than males, and this explains their outstanding collaborative learning perceptions (Eagly & Wood, 2016; Hsu et al., 2021; Spadaro et al., 2023). Based on this, gender-based differences in collaborative settings are attributed to contextual factors such as socio-cultural norms, classroom practices, or English language proficiency more than cognitive or affective factors. The fact that research findings in this regard are inconsistent supports this conclusion.

2.3. Students' Perceptions of Collaborative Learning

Various investigations have been carried out to explore students' views regarding collaborative learning across multiple contexts, including English language learning. Internationally, Al-Malki et al. (2022) showed that EFL undergraduate students in Saudi Arabia demonstrate very favorable views about working cooperatively as a useful means to enhance their achievement, interpersonal skills, and sense of responsibility. Additionally, research showed that Indonesian high school students have an overwhelmingly positive view of collaborative learning as a way to improve both participation and reading comprehension (Effendi & Wijirahayu, 2024). In a study by Normawati et al. (2023), EFL university students in Indonesia reported that collaboration boosts their motivation, engagement and performance. Nonetheless, a notable proportion of them regarded the pedagogy as time consuming.

Moreover, Meisani & Hidayati (2025) revealed that the perceptions of 328 English for specific purposes students toward collaborative learning were very positive. The students recognized the pedagogy's significance in supporting their learning satisfaction, problem-solving skills, active learning, and sense of belonging. Despite this, they also highlighted disagreement among students as an important challenge in collaborative learning. Furthermore, in a recent study by Al-Buraiki (2026), 22 middle school students in Oman reported positive perceptions toward collaborative work, stressing that it should be implemented more as it enabled them to help each other and improve their language skills. In the study, unequal participation was stressed as a major obstacle for productive collaboration.

Locally, Choujaa et al. (2026), for instance, found that EFL high school students in Morocco provided a very favorable view toward collaborative work in argumentative writing classes, arguing that it supports them in building meaningful relationships and sharing feedback. Nonetheless, the students reported that noise is a main difficulty in group work. Consistent with this, Moroccan English language undergraduates viewed both in-class and online collaborative learning positively for their capacity to promote active learning (Ait Hattani, 2024; Laachir, 2019). These studies suggest an overall desirable perception regarding the usefulness of collaboration among English language learning students at various educational settings.

Conversely, students' views on the significance of collaborative work are not always positive. For example, the majority of undergraduate students in the Philippines reported experiencing problems when communicating during group work, leading them to express dissatisfaction with collaborative work (Pajarillo-Aquino, 2019). Similarly, McLeish's (2009) study in Jamaica found that most participants, who were university students across majors, were unhappy with their experiences of collaborative learning due to fear of failure in groups. These studies indicate that collaboration could be viewed negatively when its challenges are not effectively addressed.

2.4. Gender Differences in Students' Perceptions of Collaborative Learning

Studies have been conducted to examine how gender shapes students' views regarding collaborative learning across multiple contexts, including English language learning. Numerous studies have reported substantial differences in group work perceptions among female and male students across different school levels and contexts, favoring females. Baena-Morales et al. (2020) conducted a study with 177 university students in Spain, showing that female students, compared to males, had a notably superior positive attitude toward the value of group work for increasing their learning engagement, independence, and workplace performance. Additionally, among 30 primary school students in Ethiopia, Ali (2017) found that female students held a

significantly more favorable stance than males toward the impact of collaborative writing on their performance, comprehension, collaboration, satisfaction, and problem-solving skills.

Moreover, in a study by Deveci (2018) with 64 Emirati EFL university students, although both genders held similar views regarding collaborative writing effects on active learning, general skills, and innovation, female students showed a significantly more optimistic perception toward the impact of collaborative writing on their teamwork and English language skills. Most of these studies focused on collaboration in the context of writing; however, they are relevant because collaborative writing is part of collaborative learning. Therefore, the results imply that female students may place a higher value on group work in positively impacting their collaboration, English language learning skills, future careers, and learning autonomy.

In contrast, some other studies show that male students hold more favorable views of the impact of group work on some of their learning outcomes than female students do. Abulhassan & Hamid (2021) conducted a study with 424 English-language secondary school students in Saudi Arabia, concluding that male students held a significantly more favorable opinion of the impact of collaborative teaching on their communication, performance, and satisfaction than female students. However, no significant difference was found between female and male students in their perceived value of group work activities in fostering their motivation, learning autonomy, critical thinking, and exchange of ideas. This implies that male students regarded the teacher's use of group work tasks as important in boosting their linguistic achievement and communication skills more than female students. A similar study found that female hospitality management undergraduates in the United States exhibited a more negative view toward teamwork compared to males (Ro & Choi, 2011). These results imply that male students may sometimes appreciate collaboration more than females do.

The literature further indicates that perceptions of female and male students toward collaborative learning may not always differ substantially. Drawing on 74 EFL undergraduates in Saudi Arabia, a study found no significant distinction between female and male students' perceptions of collaboration's impact on their social and writing skills (Alrayes, 2024). Similarly, Eslami et al. (2024) revealed no statistically significant difference in the perceptions of females and males (60 EFL master students in Iran) regarding the significance of collaborative learning for improving their performance, engagement, satisfaction, problem-solving skills, and understanding of the content. Likewise, in a study by Weinberger & Shonfeld (2020), one objective was to examine gender differences in the perceived importance of collaborative learning among 298 students (22 males and 276 females) at a faculty of education

in Israel. The study concluded that no significant gender-based difference existed in the students' perceptions of the value of collaboration. This suggests that gender differences in perceptions of collaboration may largely be associated with contextual factors, such as ineffective implementation of the pedagogy.

In view of previous studies, the findings appear inconsistent, highlighting the complexity of students' attitudes and gender-based influences when it comes to collaboration in second/foreign language acquisition. However, prior studies in Morocco have focused on EFL high school teachers and students' perceptions toward collaboration in the context of writing, and on university students' views of collaborative learning (Ait Hattani, 2024; Choujaa et al., 2026; Khamouja, 2025; Laachir, 2019). Consequently, research on high school students' beliefs regarding collaborative learning in English language classes is scarce. Additionally, at the international and national levels, little is known about gender differences in collaborative learning perceptions among EFL high school students. Hence, it is not yet clear whether gender shapes the perceptions of Moroccan EFL high school students toward collaboration. This constitutes the gap the study attempts to address.

3. Methodology

3.1. Research Design

Due to its observational nature, the current investigation adopted a comparative cross-sectional research design. The purpose is to explore Moroccan EFL public high school baccalaureate science students' perceptions toward collaborative learning and examine the influence of gender on those perceptions. In light of this research design, it was possible to collect data from participants at one particular point in time without any specific interventions that would manipulate the independent variable (Creswell, 2014; Setia, 2023). Hence, while exploring students' viewpoints, the study aimed to gauge whether the independent variable (students' gender) shapes the dependent variable (students' perceptions) at a single point in time.

3.2. Participants

The present study used convenience sampling in order to recruit 155 students from two public high schools in Casablanca, Morocco. Since they were easily accessible and available, two classes taught by one teacher were selected from each school for data collection. Data was collected on March during the 2025–2026 academic year. The respondents were EFL baccalaureate-level physical science students, aged 17 to 22. Most of them were between 17

and 19 (96%), while a few were between 20 and 22 (4%). Inside the classroom, all students responded to the questionnaire, but the researchers randomly excluded the questionnaires of 5 female students to ensure that the participants were gender-balanced (50% female, 50% male). Prior studies have used a similar sample size to draw comparisons between male and female students (Benattabou et al., 2021; Jalbani et al., 2023). In accordance with the principles of the Declaration of Helsinki, permission to conduct the study was obtained from the administration of the two schools. After this, participants provided informed consent following an explanation of the study's goals and the voluntary nature of their participation. The study also maintains the confidentiality and anonymity of participants' data.

3.3. Instruments

The main instrument used in the present study is a 5-point Likert scale questionnaire, which has been validated in the study of Normawati et al. (2023). With a scale that ranges from 1-strongly disagree to 5-strongly agree, the questionnaire comprises 32 statements that measure students' attitudes toward working in groups in the EFL context (see Appendix). Because the instrument was previously used in an EFL university context, the researchers provided the participants with the necessary explanation of its items during data collection. Examples of the questionnaire's statements include the following: 'Working in groups increased my comprehension,' 'Working in groups helped me to work in a more relaxed atmosphere,' and 'Working in groups helped us to participate actively in the teaching/learning process.'

Items 8, 10, 11, 12, 13, 19, and 20 of the questionnaire were reverse-coded so that they support a positive attitude of the construct being measured. Reverse-coding was performed on items 10, 11, 12, and 13 because they support the notion that group work is more time-consuming compared to individual work. Subsequently, the analysis of the questionnaire's reliability was performed through Cronbach's Alpha. As shown in Table 1, the instrument showed an overall internal consistency coefficient of 0.80, while its three parts showed coefficients of 0.76, 0.73 and 0.48, respectively. For the purposes of the present study, the instrument is considered highly reliable.

Table 1. Internal Consistency of the Questionnaire Items

Parts of the Questionnaire	N of Items	Cronbach's Alpha
Benefits of Collaborative Learning	11	0.76
Other Benefits of Collaborative Learning	12	0.73
Challenges of Collaborative Learning	9	0.48
Total	32	.80

3.4. Procedures

Before data were collected, participants had been receiving their usual lessons (i.e., vocabulary, functions, grammar, and reading, listening, speaking, and writing) through individual and collaborative instruction. Participants confirmed that their instructor sometimes asked them to work in groups or pairs to complete classroom tasks. Based on their experience with CL, respondents completed the questionnaire in the classroom under the researchers' guidance.

3.5. Data Analysis

The study relied on descriptive statistics in SPSS version 27 (frequencies, percentages, means, and standard deviations) for data analysis, which helped address the first research question. Drawing on inferential statistics, namely the Mann-Whitney U test, the current investigation set out to assess differences between the overall mean scores of male and female students regarding their attitudes toward CL. After the questionnaire's mean score was calculated for each participant, the overall mean scores were then used to compare the attitudes of male and female students. Mean scores from 3.41 to 3.20 suggest a high positive perception among students (Benlaghrissi & Ouahidi, 2024). Besides using a significance alpha level of 0.05, the study also calculated the 'r' statistic to provide insights into the strength of the effect size.

4. Results

The study sought to investigate students' perceptions of collaboration in EFL and gauge the extent of gender differences in those perceptions. Hence, the results start by addressing the first research question.

4.1. Descriptive Statistics for the First Research Question

Tables 2, 3, and 4 present the frequencies and percentages of the questionnaire items in a descending way. This provides a detailed description of students' perceptions of the benefits and challenges of collaborative learning.

Table 2 shows the perceptions of Moroccan EFL students regarding the benefits of collaborative learning. In response to item 2, 93% of respondents agreed that group activities encourage the exchange of experiences, information, and knowledge, while only 1.3% disagreed (Mean = 4.27, SD = 0.62). This is followed by item 27, in which 81% agreed that collaboration is generally a worthwhile experience, while 6% disagreed (Mean = 4.05, SD = 0.93). The next-highest scores are found in items 1 (81% agreed, 9% disagreed) and 17 (80% agreed, 8% disagreed), which stated that collaboration improves students' comprehension and allows them

to support weaker learners, with mean scores of 3.90 (SD = 0.83) and 4.01 (SD = 0.90), respectively.

A considerable proportion (78%) agreed with items 31 and 21, emphasizing that collaborative activities provide students with the opportunity to express their ideas and highlighting that they should be used more in the classroom (Mean = 3.89, SD = 0.97, and Mean = 4.02, SD = 0.99, respectively). For item 18, 70% agreed, and 13% disagreed that collaborative work sharpens communication skills (Mean = 3.85, SD = 1.06). Similarly, 70% responded to item 25 by stating that they learn new ways to support their points of view in groups, while 10% disagreed (Mean = 3.82, SD = 0.96). Regarding item 5, 69% supported the idea that collaboration helps them receive valuable feedback, but 10% disagreed (Mean = 3.75, SD = 0.90). In relation to items 3 and 29, 67% stressed that collaboration makes problem-solving easier and allows students to actively participate in learning, while only 15% and 13% disagreed (Mean = 3.74, SD = 0.98, and Mean = 3.58, SD = 0.86, respectively).

Table 2. *Students' Perceptions of the Benefits of Collaborative Learning*

Statements	N/%	SD*	D*	N*	A*	SA*	Mean	SD
2. Working in groups fostered exchange of knowledge, information and experience.	N %	0 0.0%	2 1.3%	8 5.3%	88 58.7%	52 34.7%	4.27	0.62
27. Overall, this was a worthwhile experience.	N %	5 3.3%	4 2.7%	19 12.7%	73 48.7%	49 32.7%	4.05	0.93
1. Working in groups increased my comprehension.	N %	1 0.7%	13 8.7%	15 10.0%	92 61.3%	29 19.3%	3.90	0.83
17. Working in groups enabled us to help weaker learners in the group.	N %	2 1.3%	10 6.7%	18 12.0%	74 49.3%	46 30.7%	4.01	0.90
31. I had the chance to express my ideas in the group.	N %	6 4.0%	8 5.3%	19 12.7%	81 54.0%	36 24.0%	3.89	0.97
21. Working in groups should be encouraged/continued.	N %	5 3.3%	7 4.7%	21 14.0%	64 42.7%	53 35.3%	4.02	0.99
18. Working in groups enhanced our communication skills.	N %	5 3.3%	14 9.3%	25 16.7%	61 40.7%	45 30.0%	3.85	1.06
25. I learned new ways to support my points of view.	N %	3 2.0%	12 8.0%	30 20.0%	69 46.0%	36 24.0%	3.82	0.96
5. Working in groups helped me to receive useful feedback.	N %	2 1.3%	13 8.7%	32 21.3%	76 50.7%	27 18.0%	3.75	0.90
3. Working in groups made problem-solving easier.	N %	1 0.7%	21 14.0%	27 18.0%	68 45.3%	33 22.0%	3.74	0.98
29. Working in groups helped us to participate actively in the teaching / learning process.	N %	4 2.7%	15 10.0%	31 20.7%	90 60.0%	10 6.7%	3.58	0.86

*SA= Strongly Agree; A= Agree, N= Neutral; D= Disagree; SD= Strongly Disagree

Table 3 examines the standpoints of Moroccan EFL students toward other advantages of learning collaboratively. Concerning items 22, 23, 6, 16, and 7, 66%, 64%, 63%, 62%, and 61% recognized that collaboration improves their cooperation, confidence, performance, and sense of responsibility, and allows them to use new skills, respectively ($M = 3.69$, $SD = 0.93$, $M = 3.71$, $SD = 1.03$, $M = 3.83$, $SD = 0.97$, $M = 3.58$, $SD = 1.16$, and $M = 3.61$, $SD = 1.13$). With respect to items 26 and 4, 60% responded by asserting that group work boosts their learning satisfaction and critical thinking, with a mean of 3.52 ($SD = 1.11$). Regarding items 9 and 14, 59% agreed that they learn new ways to plan their task from group work, which also allows them to produce better results compared to individual work (Mean = 3.56, $SD = 1.11$, and Mean = 3.65, $SD = 1.17$, respectively). In response to item 24, 53% noted that they are able to reach consensus despite disagreement in group work, while only 13% reported the opposite (Mean = 3.45, $SD = 0.97$). With respect to item 32, 48% pointed out that they get more work done when they work with others, while 22% did not share the same view (Mean = 3.27, $SD = 1.29$). In terms of item 28, 29% disagreed, whereas 38% indicated that group work enabled them to concentrate on collaborative instead of individual efforts, with a mean of 3.11 ($SD = 1.05$).

Table 4 demonstrates the perceptions of Moroccan EFL students toward the challenges of learning in a collaborative way. In response to item 10, although 13% disagreed, the majority (74%) indicated that they spend more time planning in group work than in individual work (Mean = 3.84, $SD = 1.03$). As for item 11, 66% of participants agreed that they spend more time producing ideas in groups than individually, while 20% disagreed, with a mean of 3.67 ($SD = 1.10$). Similarly, with respect to item 8, 66% admitted that group work can sometimes involve disagreement over which ideas should be expressed and how, while only 7% believed the opposite (Mean = 3.79, $SD = 0.96$). Concerning item 13, 63% agreed while 22% disagreed that they spend more time revising their tasks when working collaboratively as opposed to individually, with a mean of 3.51 ($SD = 1.07$).

Only 28% disagreed with item 12, whereas 49% indicated that they spend more time editing their tasks in group work compared to individual work (Mean = 3.26, $SD = 1.14$). In relation to item 20, 46% underscored that it is difficult to keep all group members engaged in the task, while 25% disagreed (Mean = 3.31, $SD = 1.07$). Although 28% supported item 15, most respondents (57%) did not agree that collaboration facilitates a more relaxed learning atmosphere (Mean = 2.67, $SD = 1.25$). Regarding item 30, 21% agreed that group members make equal contributions to the tasks, while 61% did not agree (Mean = 2.37, $SD = 1.23$).

However, 55% disagreed with item 19, while only 16% agreed that collaborative work is a waste of time (Mean = 2.37, SD = 1.14).

Table 3. Students' Perceptions of Other Benefits of Collaborative Learning

Statements	N/%	SD*	D*	N*	A*	SA*	Mean	SD
22. Having completed group projects, I feel I am more cooperative in my learning.	N %	1 0.7%	19 12.7%	31 20.7%	73 48.7%	26 17.3%	3.69	0.93
23. Having completed group projects, I feel I have more confidence working with other students.	N %	7 4.7%	9 6.0%	38 25.3%	62 41.3%	34 22.7%	3.71	1.03
6. Working in groups improved our performance.	N %	4 2.7%	5 3.3%	46 30.7%	53 35.3%	42 28.0%	3.83	0.97
16. Working in groups helped me to take more responsibility – for myself and the group.	N %	10 6.7%	19 12.7%	28 18.7%	60 40.0%	33 22.0%	3.58	1.16
7. Working in groups enabled us to use skills which individual assessments do not.	N %	8 5.3%	19 12.7%	31 20.7%	58 38.7%	34 22.7%	3.61	1.13
26. I enjoy learning more than I did before due to group work.	N %	10 6.7%	17 11.3%	34 22.7%	63 42.0%	26 17.3%	3.52	1.11
4. Working in groups stimulated my critical thinking skills.	N %	2 1.3%	14 9.3%	43 28.7%	66 44.0%	25 16.7%	3.65	0.91
9. I learned new ways to plan my task from the group.	N %	8 5.3%	19 12.7%	34 22.7%	59 39.3%	30 20.0%	3.56	1.11
14. The group produced a better result as compared to individual task.	N %	10 6.7%	13 8.7%	39 26.0%	46 30.7%	42 28.0%	3.65	1.17
24. Despite disagreement, the group was able to reach agreement.	N %	8 5.3%	12 8.0%	50 33.3%	65 43.3%	15 10.0%	3.45	0.97
32. I get more work done when I work with others.	N %	15 10.0%	33 22.0%	30 20.0%	40 26.7%	32 21.3%	3.27	1.29
28. Working in groups helped me to focus on collective efforts rather than individual effort.	N %	9 6.0%	35 23.3%	49 32.7%	44 29.3%	13 8.7%	3.11	1.05

*SA= Strongly Agree; A= Agree, N= Neutral; D= Disagree; SD= Strongly Disagree

Table 5 shows the mean and standard deviation for males and females (M= 3.45, SD= .42), (M= 3.36, SD= .35), respectively. The overall mean is 3.41 (M = 3.405), suggesting a relatively high positive perception of collaborative learning among students. The mean scores ranged between 2.13 and 4.31 for males, while they ranged between 2.34 and 4.00 for females. In light of the standard deviations, participants' responses show a relatively low dispersion.

To calibrate whether the data were normally distributed, the investigation employed the Shapiro-Wilk test. As shown in Table 6, results yielded p-values of .009 for males and .007 for females, indicating that the normality assumption is violated.

Table 4. Students' Perceptions of the Challenges of Collaborative Learning

Statements	N/%	SD*	D*	N*	A*	SA*	Mean	SD
10. While working in groups, we spent more time planning than I do when I do my task alone.	N %	5 3.3%	15 10.0%	18 12.0%	73 48.7%	39 26.0%	3.84	1.03
11. While working in groups, we spent more time generating ideas than I do when I do my task alone.	N %	4 2.7%	26 17.3%	21 14.0%	64 42.7%	35 23.3%	3.67	1.10
8. We sometimes disagreed about what to say or how to express our ideas.	N %	5 3.3%	6 4.0%	40 26.7%	64 42.7%	35 23.3%	3.79	0.96
13. While working in groups, we spent more time revising than I do when I do my task alone.	N %	7 4.7%	25 16.7%	23 15.3%	75 50.0%	20 13.3%	3.51	1.07
12. While working in groups, we spent more time checking spelling, punctuation and grammar than I do when I do my task alone.	N %	11 7.3%	31 20.7%	35 23.3%	54 36.0%	19 12.7%	3.26	1.14
20. Working in groups makes it difficult to get group members to actively participate in tasks.	N %	6 4.0%	31 20.7%	43 28.7%	50 33.3%	20 13.3%	3.31	1.07
15. Working in groups helped me to work in a more relaxed atmosphere.	N %	24 16.0%	61 40.7%	23 15.3%	25 16.7%	17 11.3%	2.67	1.25
30. While working in groups, all group members contributed equally to the project.	N %	44 29.3%	48 32.0%	26 17.3%	22 14.7%	10 6.7%	2.37	1.23
19. Working in groups is a waste of time as we keep explaining things to others.	N %	43 28.7%	39 26.0%	44 29.3%	18 12.0%	6 4.0%	2.37	1.14

*SA= Strongly Agree; A= Agree, N= Neutral; D= Disagree; SD= Strongly Disagree

Table 5. Descriptive Statistics (means and standard deviations)

Gender	N	Mean	Minimum	Maximum	Std. Deviation	Std. Error Mean
Male	75	3.45	2.13	4.31	.42	.05
Female	75	3.36	2.34	4.00	.35	.04

Table 6. Normal Distribution Test

Gender	Shapiro-Wilk		
	Statistic	df	Sig.
Male	.955	75	.009
Female	.952	75	.007

4.2. Inferential Statistics for the Second Research Question

Inferential statistics were utilized to examine gender differences in students' perceptions of collaboration. As already noted above, the response distributions deviated from normality; therefore, gender differences in participants' perceptions of CL were assessed using a nonparametric test, namely the Mann-Whitney U test. As indicated in Table 7, no statistically

significant gender-based differences in this sample were observed in students' perceptions ($U = 2342$, $Z = -1.77$, $p = .077$). Further analysis reveals a small effect size ($r = .14$).

Table 7. The Mann-Whitney U Test for Students' Perceptions

Gender	N	Mean Rank	Rank Sum	U	Z	r	p
Male	75	81.77	6133.00	2342.00	-1.77	.14	.077
Female	75	69.23	5192.00				

5. Discussion

Regarding the first research question, the current study found that Moroccan public high school students possess desirable perceptions toward collaborative learning in EFL classes. These results reflect the tenets of social constructivism, social cognitive learning, and self-determinism theories. These theories emphasize the significance of facilitated human social interactions, observation and modeling in improving students' learning outcomes and processes through meeting their needs (i.e., relatedness, competence, and autonomy).

Based on the results, the study is consistent with previous research (Al-Buraiki, 2026; Al-Malki et al., 2022; Choujaa et al., 2026; Effendi & Wijirahayu, 2024). For instance, the study aligns with that of Al-Malki et al. (2022) in that most EFL participants underscored the power of collaborative learning in boosting their interpersonal skills, achievement, and sense of responsibility. It also corroborates the findings of Choujaa et al. (2026), who found that most respondents reported that collaboration fostered their confidence and learning satisfaction in the context of argumentative writing. The study further aligns with those of Normawati et al. (2023), Meisani & Hidayati (2025), Al-Buraiki (2026), and Choujaa et al. (2026), where time limits, disagreement, unequal participation, and noise were reported as important challenges in group work.

Meanwhile, the current study's findings do not concur with some prior studies (McLeish, 2009; Pajarillo-Aquino, 2019), in which most students expressed a negative attitude toward CL. For example, Pajarillo-Aquino (2019) reported that students in the Philippines expressed overall dissatisfaction with CL, mostly due to communication problems and unequal participation. University students in Jamaica also showed reluctance to engage in CL, believing it could lead to failure (McLeish, 2009). This highlights the importance of addressing the limitations of collaborative work before its implementation so that students can appreciate its benefits.

In applying the Mann-Whitney U test, the researchers sought to assess the extent to which there is a gender-based difference in the perceptions of students toward CL, thereby addressing the

second research question. No statistically significant gender-based differences in this sample were observed, and a small effect size was found. Based on the results, we fail to reject the null hypothesis that there is no statistically significant gender-based difference in the students' perceptions regarding learning collaboratively. In light of social role theory, these results indicate that both female and male students in the Moroccan EFL high school context have similar positive perceptions toward their collaborative learning experience. This might be due to students' prior favorable experiences with group work in their classes.

The study resonates with the findings of some prior studies (Alrayes, 2024; Eslami et al., 2024; Weinberger & Shonfeld, 2020). As reported by Eslami et al. (2024), gender did not significantly shape Iranian EFL students' perceptions toward the role of CL in improving their performance, problem-solving, comprehension, and learning satisfaction. Nonetheless, the study is not in line with other research (Abulhassan & Hamid, 2021; Ali, 2017; Baena-Morales et al., 2020; Deveci, 2018). On the one hand, Abulhassan & Hamid (2021), for example, showed that Saudi male English-language students held a significantly more positive view of CL regarding its effects on their communication skills and linguistic achievement than female students. On the other hand, Deveci (2018) and Baena-Morales et al. (2020) revealed that United Arab Emirates and Spanish female students had significantly more optimistic views of CL in terms of its effects on their English language skills, collaboration, engagement, and learning autonomy than their male counterparts. The clear gender differences found in some previous studies could be more closely associated with contextual factors such as classroom practices, socio-cultural norms, English language proficiency, etc., and not with affective and cognitive factors.

6. Conclusion

The study looked at how Moroccan EFL public high school students perceive collaborative learning and the potential role of gender in shaping their views. Results showed that there was an overall positive perception of collaborative learning in the EFL classroom, but no clear statistically significant difference in this sample was observed in perceptions of collaborative activities between females and males. Most studies in the Moroccan EFL high school context have concentrated on exploring teachers and students' perceptions toward collaborative writing and university students' views of collaborative learning. Internationally, studies have focused either on exploring students' perceptions of collaborative work or examining gender-based differences in their perceptions. Hence, by simultaneously investigating Moroccan EFL public high school students' perceptions toward collaboration and examining gender differences, the current study constitutes an important contribution to the literature.

The present investigation offers significant implications for students, teachers, and policymakers. As most participants acknowledged that collaboration fosters their problem-solving, critical thinking, feedback exchange, sense of responsibility, and social skills, this suggests their readiness to receive instructions through CL. Hence, collaborative learning should be integrated into Moroccan EFL high school classrooms to transform students' view of learning from a product-based to a process-based one. This will encourage them to become reflective learners and promote their learning autonomy. The findings also suggest that teachers should utilize effective collaborative learning strategies to successfully transform their teaching practices from product-oriented to process-oriented. Consequently, policies that would facilitate the successful integration of more structured collaborative work into Moroccan EFL high school classes are highly needed.

Future research should address the study's limitations. The focus in the current study was on second-year baccalaureate students from two public high schools in Casablanca, particularly those in the physical science stream. Therefore, to promote the generalizability of the findings, future studies should incorporate the perceptions of public and private high school students from different grades, streams, and cities in Morocco. They also need to determine whether gender shapes Moroccan EFL high school students' individual achievement in a collaborative setting. More studies are needed to examine the role of other variables, such as age, stream, and grade, in shaping students' perceptions of collaborative learning. Additionally, the correlation between students' perceptions of collaboration and EFL test scores must be examined. Ultimately, quasi-experiments are necessary to gauge the extent to which different modes of collaboration (i.e., pair work vs. group work/ mixed-gender vs. same-gender) influence EFL students' perceptions and achievement Moroccan high schools.

Disclosure Statement

The authors declare that there is no conflict of interest regarding the publication of this article. No financial, personal, or professional relationships have influenced the research, analysis, or conclusions presented in this work.

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Appendix

Students' Perceptions of the Benefits and Challenges of Collaborative Learning

N	Statement	SD	D	N	A	SA
1	Working in groups increased my comprehension.					
2	Working in groups fostered exchange of knowledge, information and experience.					
3	Working in groups made problem-solving easier.					
4	Working in groups stimulated my critical thinking skills.					
5	Working in groups helped me to receive useful feedback.					
6	Working in groups improved our performance.					
7	Working in groups enabled us to use skills which individual assessments do not.					
8	We sometimes disagreed about what to say or how to express our ideas.					
9	I learned new ways to plan my task from the group.					
10	While working in groups, we spent more time planning than I do when I do my task alone.					
11	While working in groups, we spent more time generating ideas than I do when I do my task alone.					
12	While working in groups, we spent more time checking spelling, punctuation and grammar than I do when I do my task alone.					
13	While working in groups, we spent more time revising than I do when I do my task alone.					
14	The group produced a better result as compared to individual task.					
15	Working in groups helped me to work in a more relaxed atmosphere.					
16	Working in groups helped me to take more responsibility – for myself and the group.					
17	Working in groups enabled us to help weaker learners in the group.					
18	Working in groups enhanced our communication skills.					
19	Working in groups is a waste of time as we keep explaining things to others.					
20	Working in groups makes it difficult to get group members to actively participate in tasks.					
21	Working in groups should be encouraged/continued.					
22	Having completed group projects, I feel I am more cooperative in my learning.					
23	Having completed group projects, I feel I have more confidence working with other students.					
24	Despite disagreement, the group was able to reach agreement.					
25	I learned new ways to support my points of view.					
26	I enjoy learning more than I did before due to group work.					
27	Overall, this was a worthwhile experience.					
28	Working in groups helped me to focus on collective efforts rather than individual effort.					
29	Working in groups helped us to participate actively in the teaching/learning process.					
30	While working in groups, all group members contributed equally to the project.					
31	I had the chance to express my ideas in the group.					
32	I get more work done when I work with others.					