Exploring inner voice in the EFL classroom: From materials development perspective

Authors:

Bita Ghalandar-Zehi[1]

Hossein Rahmanpanah[2]

Ahmad Mohseni[3]

Abstract

Several investigations in the psychology domain, educational psychology, and other related subjects have examined the inner voice. However, it has not been used as much in teaching foreign languages, particularly in developing learning materials. This study aimed to develop new English learning materials based on Tomlinson's text-driven approach to enhance learners' inner voice through instruction using the newly developed materials. The participants in this study were 40 intermediate female EFL learners, aged 20-35. All participants were selected through convenience sampling and were native speakers of Persian. The researchers then assigned the participants randomly into two experimental and control groups, each including 20 participants. Data were collected through an inner voice questionnaire and semi-structured interviews, utilizing both quantitative and qualitative methods to align with the study's objectives, participant characteristics, and research questions. The quantitative data were statistically analyzed using SPSS (version 22), revealing that learners demonstrated a moderately high engagement with their inner voice after instruction with the newly developed materials. Qualitative insights emphasized key themes, including the natural use of English in internal thought processes, more frequent internal dialogues, and deeper mental engagement with the language. The study suggests that textbook developers and curriculum designers should consider new approaches to meet EFL learners' psychological and cognitive needs, particularly in fostering inner voice processing for deeper engagement.

Keywords: EFL Learners, Inner Voice, Language Learning Materials, Language Learning Psychology, Text-Driven Approach

1. PhD Candidate of TEFL, Department of English, South Tehran Branch, Islamic Azad University, Tehran, Iran. E-mail: Bita.ghalandar87@gmail.com
2. English Department, Faculty of Persian Literature and Foreign Languages, Islamic Azad University, Tehran, Iran. (Corresponding Author): Email: hossein_2003@hotmail.com
3. English Department, Faculty of Persian Literature and Foreign Languages, Islamic Azad University, South Tehran Branch, Tehran, Iran. E-mail: amohseny1328@gmail.com

1. Introduction

The main concept explored in this study is the inner voice. Learning a new language involves more than just learning how to speak, write, listen, and read; it also means learning how to think and communicate with oneself, which is the most obvious reason for assisting L2 learners in using their inner voice. Tomlinson (2020) asserted that it is highly beneficial to discuss the presence and importance of the inner voice with learners and to advise them to use the L2 inner voice as frequently as feasible. Providing thinking assignments for learners to complete in their L2 is helpful in this regard. While applying the text-driven approach (TDA) (Tomlinson, 2003; Tomlinson & Masuhara, 2017), for instance, it is advised to provide the learners with a mental preparation task to complete before they meet the main text.

According to Tomlinson (2009), developing materials using the text-driven approach involves learners using kinesthetic, inner voice, and imagery exercises. To achieve this aim, textbooks may be constructed by removing non-humanistic components and increasing the amount of content in portions that encourage learners to reflect, think, feel, and act to learn (Tomlinson, 2003).

The new perspective on language teaching suggests that instruction should shift away from focusing solely on linguistic structures—such as notions, functions, and lexical items—in favour of a task-based approach. Recent studies by Pisharady and JG (2021) and Ellis and Shintani (2014) underscored the effectiveness of language learning when learners participate in meaningful tasks that encourage active language use in real contexts. Thus, rather than structuring language requirements and instruction around discrete elements, a task-based methodology encourages learners to develop language skills that apply to practical situations, fostering a more holistic and interactive learning environment. This strategy not only aids in internalizing language use, but also enhances learners' ability to transfer skills across various linguistic contexts.

The logic behind this study was to narrow the gap between theory and practice in developing language learning materials based on the text-driven approach suggested by several researchers (Park, 2014; Gilmore,2007) as an effective method of developing language learning materials. Therefore, the researchers designed a textbook based on the text-driven method to raise textbook developers' and curriculum

designers' awareness of this method and provide learners with various opportunities to use their L2 inner voice. In this regard, the following research questions were posited:

- Does the newly developed materials have a significant impact on enhancing the inner voice among Iranian EFL learners compared to the current materials?
- How do Iranian EFL learners perceive the impact of the newly developed materials on the enhancement of their inner voice?

2. Review of Related Literature

The terms "private speech" and "inner voice" are frequently used interchangeably in the literature. "Private speech" refers to a form of self-directed language use, while "inner voice" refers to the silent conversation individuals hold within themselves (Gabryś-Barker, 2015; Lantolf, 2000). According to Lantolf (2000), private speech acts as a form of language play, where learners synthesize new input to restore cognitive balance. This inner voice plays a crucial role in self-regulation, allowing learners to rehearse, plan, and monitor their language use before engaging in external communication.

Lantolf's (2000) conceptualization of private speech can be combined with Anderson's (2005) three-stage model of language processing, providing insight into how language production and fluency are developed. Anderson described language processing in three stages: perceptual processing, where input is stored in short-term memory (STM) for interpretation; parsing, where the input is transformed into meaning-based representations; and usage, where declarative knowledge stored in long-term memory (LTM) is applied to mental representations. The interplay between private speech and this processing model suggests that learners use their inner voice to mentally rehearse and consolidate new information, facilitating fluency.

Resnik (2022) explored how multilinguals utilized their L1 and L2 inner speech, finding that context and task demands heavily influenced which language was used. For complex or emotionally charged tasks, individuals tend to revert to their L1 for precision and comfort. On the other hand, L2 inner speech emerges more frequently in immersive L2 environments or during active language learning. The use of L2 inner

speech is crucial for learners to practice linguistic structures internally, which aids in refining language skills before they are employed in external communication. This supports the dynamic and fluid nature of inner speech in multilingual individuals, reflecting differences in fluency, emotional connection, and context.

In the context of EFL (English as a Foreign Language) learners, researchers have noted that learners often begin by using private speech to facilitate language acquisition before transitioning to more sophisticated L2 inner voice (De Guerrero, 2018). For instance, Lee (2006, 2008) found that Korean EFL learners used private speech for a range of functions, including establishing meanings, memorization, and self-motivation. Similarly, studies by Wang and Hyun (2009) on Taiwanese learners, and Scott and Fuente (2008) on English learners of French and Spanish, identified the use of private speech to recall vocabulary, practice pronunciation, and solve tasks. These findings highlight that learners often combine L1 and L2 in their private speech, even when instructed to use only L2. This reflects the transitional nature of private speech in moving towards full internalization of the L2.

Tomlinson (2020) added that although private speech is often observed at the beginner levels, many learners focus more on micro-processing and micro-production than on using an inner voice. He notes that as learners grow in confidence and competence, they begin using their inner voice more frequently, especially when engaged in tasks individually or while listening to a teacher. In contrast, private speech occurs during group tasks or collaborative work. Tomlinson (2020) suggested that with proper encouragement and training, learners can be taught to use their L2 inner voice more consistently, regardless of prior reliance on private speech.

Transitioning from cognitive processes like inner voice, the text-driven approach (TDA) offers a structured methodology for developing language learning materials that promote both cognitive and emotional engagement. The text-driven approach emphasizes the use of authentic texts that engage learners on an emotional level, providing them with opportunities for meaningful language use and reflection (Tomlinson, 2003, 2016). TDA places equal importance on affective engagement—creating tasks that not only challenge learners intellectually but also resonate with them emotionally (Richards & Renandya, 2022; Mackey et al., 2016).

Tomlinson (2016, 2018) argued that texts should connect with learners' lives, experiences, and emotions, making learning a more holistic process. Appropriate texts, therefore, should captivate learners' attention and stimulate both cognitive and emotional responses. Through experiential tasks and input-response activities, TDA encourages learners to critically engage with the text, explore language structures, and connect these elements with their own experiences.

This method enhances language learning by using interpretation tasks (e.g., discussions, critical thinking activities) and awareness tasks (e.g., focusing on discourse or communication strategies). These activities help learners process language more deeply, drawing connections between language input and real-world application. Furthermore, TDA integrates personal reflection, where learners relate texts to their own lives, making learning more meaningful.

The integration of inner voice into a text-driven approach is a crucial component of Tomlinson's pedagogy (2011). He emphasized that by engaging with texts, learners are encouraged to use their inner voice and private speech to rehearse, reflect, and process language. This engagement, coupled with inner speech exercises, allows learners to internalize the language more deeply. As learners gain confidence, they begin to use their inner voice for tasks such as reflecting on class material, imagining conversations, and practicing language structures. This transition from private speech to inner voice aligns with the TDA's goal of fostering deeper cognitive and emotional engagement with the language.

The literature on inner voice, private speech, and the text-driven approach to materials development provides a comprehensive understanding of how cognitive processes interact with language learning materials. Private speech plays a foundational role in early language learning stages, helping learners scaffold new knowledge. As learners progress, their inner voice becomes a critical tool for practicing and refining language use. The text-driven approach, with its emphasis on authentic texts and emotional engagement, provides an effective framework for incorporating these cognitive processes into language learning. By fostering both cognitive and emotional connections to the material, TDA enhances learners' overall engagement and language development.

3. Method

3.1. Participants

Forty intermediate female English as a Foreign Language (EFL) learners, aged 20 to 35, participated in the study. Native Persian speakers were selected through convenience sampling, and the selection of female participants was incidental, based on their availability and willingness to take part. A non-probability sampling method called convenience sampling depends on gathering data from learners in the target group who are willing and able to participate in the research. To ensure the homogeneity of the learners, before the start of the courses, a Preliminary English Test (PET) was administered among the 40 learners. The researchers then randomly assigned the participants into two experimental and control groups, each including 20 participants.

3.2. Instruments

Interview

As it is crucial to obtain a private, individualized understanding of L2 learners' experiences since the inner voice is a subjective phenomenon that happens privately in consciousness, following the completion of the tenth week of the treatment, a semi-structured interview was conducted. Interview questions were taken from the literature on inner voice in EFL and SLA contexts. In a semi-structured interview, the interviewer is eager to follow up on interesting progress and allow the interviewee to expand on certain topics. Dornyei (2007) stated that there is a pre-prepared set of guiding questions and suggestions.

The semi-structured interview comprised four initial open-ended questions designed to explore the participants' experiences with their inner voice in English (L2) and its relationship to the newly developed learning materials. The questions focused on understanding if and when participants experienced an L2 inner voice, under what circumstances it emerged, and whether they used this inner voice while performing different tasks. Participants were asked to reflect on the frequency and contexts of their inner voice use, such as when engaged in specific learning activities or problem-solving situations. The semi-structured interview questions related to the inner voice in this study were as follows:

1. Have you ever experienced an inner voice in a second language (L2)?

2. If so, when, where, and under what circumstances has this L2 inner voice occur?

3. Do you use your L2 inner voice while performing different tasks?

4. If so, when, where, and for what tasks do you use it?

Test

To ascertain the general English proficiency level of the EFL learners and ensure their homogeneity, the researchers applied the PET (Quintana, 2003) as the standard test for language competency at the start of the study. The test consisted of 35 reading and 7 writing questions (90 minutes), 25 listening questions (30 minutes), and 4 speaking questions (10 minutes), all at an intermediate level. Reliability indices were estimated using KR-21 and Inter-Rater Reliability methods. Pretest reliability was .70, while posttest reliability for listening and reading was .85 and .91, respectively, deemed appropriate per Fulcher and Davidson (2007). Significant inter-rater agreement was found for both the pretest and posttest of speaking and writing, with strong correlations in all cases (p < .05)."

Inner Voice Questionnaire

The Internal Representation Questionnaire (IRQ), developed by Roebuck and Lupyan (2020), is designed to measure individuals' subjective experiences of internal representations and to quantify variations in "modes of thinking" across different dimensions within a single comprehensive tool. This questionnaire aims to capture how people mentally process information, particularly how they think, visualize, and verbalize internally.

The IRQ includes a specific factor focused on internal verbalization, consisting of 12 statements that assess the extent to which individuals think using an internal "inner voice." These questions explore the experience of hearing words or having conversations within one's mind. For instance, participants might respond to statements such as, "I think about problems in my mind in the form of a conversation with myself," or "I hear words in my 'mind's ear' when I think." To adapt these questions for use in an English as a Foreign Language (EFL) context, minor adjustments were

made to the phrasing to ensure clarity and relevance for non-native English speakers while maintaining the integrity of the original content. These modifications were intended to make the statements more comprehensible and relatable for individuals who think and process language in a second language. Each statement is indicated on a five-point Likert scale from strongly disagree to agree strongly. Cronbach's α was calculated as .914 for the pretest and .956 for the posttest of inner voice. A factor analysis was conducted to evaluate the construct validity of the 12-item questionnaire.

The results showed that all items loaded strongly onto distinct factors, validating their effectiveness in measuring constructs related to inner voice in English. Most items had high loadings on the primary factor, reflecting a general construct of inner voice, while a few also loaded on a secondary factor, possibly indicating a specific aspect of internal verbal experiences. Factor loadings ranged from 0.74 to 0.92 on Factor 1 and from 0.25 to 0.85 on Factor 2, confirming good construct validity.

3.3. Procedure

This study employed a mixed-methods approach to investigate the impact of a text-driven approach on enhancing EFL learners' inner voice experiences. The research was conducted in several stages, integrating both quantitative and qualitative data to provide a comprehensive assessment of the intervention's effectiveness.

Initially, the researchers developed a new textbook based on Tomlinson and Masuhara's (2017) materials development principles. The textbook was designed to engage learners in meaningful language use that promotes inner voice in English. To ensure the effectiveness of the newly developed materials, the content was carefully aligned with the cognitive processes involved in inner voice.

Participants were divided into two groups: an experimental group, which used the newly developed materials, and a control group, which followed the current curriculum. Prior to the intervention, all participants completed the Preliminary English Test (PET) to assess their language proficiency and ensure homogeneity between the groups.

The experimental group received instruction using the new textbook over a period of 10 weeks, with classes held three times a week, each lasting two hours. During this time, the control group continued with their regular curriculum. The new

textbook was implemented in a way that encouraged learners to engage in internal verbalization and reflection in English through various tasks and activities designed to stimulate their inner voice.

Quantitative data were gathered using the Internal Representations Questionnaire, which included 12 items specifically related to internal verbalization experiences. The statements in the questionnaire, such as "I think about problems I face in class in my mind in English conversations with myself," were rated on a 5-point Likert scale, allowing for the measurement of learners' engagement with their inner voice. The questionnaire was administered as a pretest and posttest for both the experimental and control groups to measure changes over time.

In addition to the questionnaire, qualitative data were collected through semi-structured interviews with five participants from the experimental group. These interviews were conducted after the intervention and focused on learners' personal experiences and perceptions regarding their inner voice while using the new textbook. Questions were designed to explore how the textbook influenced their inner voice and cognitive processes in English.

To ensure comprehensive data triangulation, the quantitative data from the questionnaire were complemented by qualitative insights from the interviews. While the quantitative data provided a broad view of the learners' inner voice experiences, the qualitative data offered deeper, contextualized understandings of these experiences. This combination allowed for a more robust and nuanced analysis, enabling the researchers to validate and interpret the findings with greater confidence.

The quantitative data were analyzed using SPSS (22) to identify any statistically significant changes in learners' inner voice experiences between the pre-test and post-test. Descriptive statistics, as well as paired-sample t-tests, were used to compare the two groups. For the qualitative data, a descriptive content analysis was conducted. Key codes and themes were identified from the interview transcripts, revealing patterns and insights that enriched the quantitative findings.

The combined use of quantitative and qualitative data allowed the researchers to triangulate the findings effectively. The results demonstrated that the experimental group showed a significant improvement in their inner voice experiences compared to the control group, indicating the positive impact of the text-driven approach. The

qualitative data further supported these findings by providing detailed narratives and examples of how learners engaged in inner voice in English.

In conclusion, this mixed-methods approach provided a comprehensive understanding of the impact of the newly developed materials on EFL learners' inner voice. By integrating quantitative measures with qualitative insights, the study offered a well-rounded assessment of the effectiveness of the text-driven approach in fostering learners' inner voice in English.

4. Results

This study attempted to investigate the impact of newly developed materials on EFL learners' inner voice. In doing so, a series of analyses were conducted. Before testing the null hypothesis, the assumption for the normality of scores in both groups was checked. The skewness and kurtosis indices for the pretest and posttest of inner voice were within the ranges of ±2; hence normality of the data. It should be noted that the criteria of ±2 were proposed by Bae & Bachman, 2010; and George & Mallery, 2020. The non-significant results of Levene's tests (p > .05) of inner voice indicated that the assumption of homogeneity of variances was retained.

4.1. First Research Question

Homogeneity Test

Table 1 displays the descriptive statistics for the proficiency pre-tests of both groups, indicating similar means in all four language skills. This suggests that the groups were homogenous in terms of language proficiency before the intervention.

Table 1.

Descriptive Statistics for the Pretests of Proficiency by Group

Dependent Variable	Group	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
Listening	Experimental	11.550	.991	9.544	13.556
	Control	11.500	.991	9.494	13.506
Reading	Experimental	15.800	1.157	13.457	18.143
	Control	15.400	1.157	13.057	17.743
Speaking	Experimental	14.450	1.090	12.243	16.657
	Control	13.850	1.090	11.643	16.057
Writing	Experimental	11.650	.917	9.793	13.507
	Control	12.200	.917	10.343	14.057

Table 2 shows the results of the MANOVA test, confirming no significant difference between the groups' proficiency levels ($F (4, 35) = .288$, $p > .05$). This ensures that any observed changes in the study are attributable to the intervention and not pre-existing proficiency differences.

Table 2.

Multivariate Tests for Pretests of Proficiency by Group

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Intercept	Pillai's Trace	.918	97.655	4	35	.000	.918
	Wilks' Lambda	.082	97.655	4	35	.000	.918
	Hotelling's Trace	11.161	97.655	4	35	.000	.918
	Roy's Largest Root	11.161	97.655	4	35	.000	.918
Group	Pillai's Trace	.032	.288	4	35	.884	.032
	Wilks' Lambda	.968	.288	4	35	.884	.032
	Hotelling's Trace	.033	.288	4	35	.884	.032
	Roy's Largest Root	.033	.288	4	35	.884	.032

Testing the Null Hypothesis

To investigate the research question, the efficacy of newly developed materials during 30 instructional sessions on learners' inner voice was explored. Therefore, the following null hypothesis was formulated:

"Newly developed materials did not have any significant impact on enhancing the inner voice among Iranian EFL learners."

First; One-Way ANCOVA requires that there should be a linear relationship between pretest and posttest of inner voice. The significant results of the linearity test ($F (1, 39) = 27.08$, $p < .05$, eta squared $= .605$ representing a large effect size) (Table 3) rejected the statistical null-hypothesis that the relationship between posttest of inner voice and pretest was not linear. In other words; there was a linear relationship between the two variables.

Table 3.

Testing Assumption of Linearity of Relationship between Pretest and Posttest of Inner Voice

			Sum of Squares	df	Mean Square	F	Sig.
Posttest of Inner Voice * Pretest of Inner Voice	Between Groups	(Combined)	12.580	16	.786	2.206	.041
		Linearity	9.654	1	9.654	27.086	.000
		Deviation from Linearity	2.926	15	.195	.547	.885
	Within Groups		8.197	23	.356		
	Total		20.777	39	Eta-Squared		.605

Second; One-Way ANCOVA requires that there should be linear relationships between pretest and posttest of inner voice across the two groups; i.e. homogeneity of regression slopes (Table 4). The non-significant interaction between covariate (pretest), and the independent variable (F (1, 36) = .185, p > .05, Partial eta squared = .005 representing a weak effect size) indicated that that the statistical assumption that the relationships between pretest and posttest of inner voice were linear across the two groups was supported. In other words; there were linear relationships between pretest and posttest of inner voice across the experimental and control groups.

Table 4.

Testing Homogeneity of Regression Slopes Posttest of Inner Voice by Groups Pretest

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Group	.340	1	.340	1.479	.232	.039
Pretest	7.082	1	7.082	30.815	.000	.461
Group * Pretest	.042	1	.042	.185	.670	.005
Error	8.273	36	.230			
Total	245.611	40				

One-Way ANCOVA assumes homogeneity of variances of the groups. The non-significant results of the Levene's tests (F (1, 38) = .435, p > .05) (Table 5) indicated that the assumption of homogeneity of variances was retained on posttest of inner voice after controlling for the effect of pretest.

Table 5.

Levene's Test of Homogeneity of Variances for Posttest of Inner Voice by Groups with Pretest

F	df1	df2	Sig.
.435	1	38	.514

Tests the null hypothesis that the error variance of the dependent variable is equal across groups.

Table 6 shows the experimental and control groups' means on the posttest of inner voice after controlling for the effect of the pretest. The results showed that the experimental group (M = 2.64, SE =.107) had a higher mean than the control group (M = 2.10, SE =.107) on the posttest of inner voice after controlling for the effect of the pretest.

Table 6.

Descriptive Statistics for Posttest of Inner Voice by Group with Pretest

Group	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Experimental	2.641[a]	.107	2.424	2.858
Control	2.101[a]	.107	1.884	2.318

a. Covariates appearing in the model are evaluated at the following values: Pretest = 1.77.

Table 7 shows the main results of one-way ANCOVA. The results ($F_{(1, 37)}$ = 12.49, p <.05, partial $\eta2$ =.252, representing a large effect size) indicated that the experimental group significantly outperformed the control group on the post-test of inner voice after controlling for the effect of the pretest. Thus, the null hypothesis, "newly developed materials did not have any significant impact on enhancing the inner voice among Iranian EFL learners," was rejected. Rejecting the null hypothesis indicates that the instructional intervention had a significant effect on the learners' cognitive engagement with the English language. The experimental group's enhanced inner voice suggests that they were not only processing the language more fluently but were also integrating English into their internal thought processes more effectively. This finding is critical because developing an inner voice in the target language is closely linked to increased language proficiency, particularly in areas like speaking, comprehension, and spontaneous communication.

Table 7.

Tests of Between-Subjects Effects for Posttest of Inner Voice by Groups with Pretest

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Pretest	7.444	1	7.444	33.124	.000	.472
Group	2.808	1	2.808	12.495	.001	.252
Error	8.315	37	.225			
Total	245.611	40				

4.2. Second Research Question

In addition to the inner voice questionnaire, a semi-structured interview was conducted to answer the research question. Creswell (2018) states that to limit the impact of the interview on the participants' responses and ensure that the descriptions accurately reflected the participants' real-life experiences, the researcher initially attempted to conduct interviews in a semi-structured manner to ensure the quality of the study.

Second, to communicate the significance of the oral presentation during the interview, the researchers precisely wrote five participant's descriptions of the experience. Participants were asked a series of questions related to their experiences with the newly developed materials and their L2 inner voice. For instance, they were asked, 'Have you ever experienced an inner voice in a second language (L2)?' and 'If so, when, where, and under what circumstances did it occur?' Additionally, participants were asked, 'Do you use your L2 inner voice while doing different tasks?' and 'If so, when, where, and for what tasks?' Their responses provided valuable insights into how the instructional interventions influenced the development and use of their L2 inner voice during various tasks. Third, the primary phase contained paraphrases of the meaning units. Finally, the researchers explained each before integrating it into the summary statement, or general summary. As a result, five themes were used to represent the replies' extracted codes:

Theme 1: Spontaneous L2 use

Theme 2: Thinking in L2

Theme 3: Stimuli for L2 utterances

Theme 4: Exposure to L2

Theme 5: Conscious imitation of L2 pronunciation

Theme 6: Mental assessment of L2 use

Theme 1: Spontaneous L2 use

According to the interviewees of the study, they started thinking naturally in the target language during this treatment. The quotes from the interview along with an explanation of them are included below. One of the learners thought in L2 spontaneously while watching television shows:

When I play a movie in English, I think in English without making decision to do that. Honestly When I watch Persian television programs, I think in the Persian language. I used to think in Persian when I watched an English-language television show, but these days I think in English most of the time.

Another student observed that, while reading the materials, she was mentally implementing the L2 language:

You know I don't translate L2 text in Persian and … I understand it and explain it for myself in English

This learner highlights two points: (1) She utilizes her L2 inner voice, or spontaneous thought, in the language when she is in an L2 environment; and (2) Her increased L2 competency allows her L2 inner voice to work naturally and subconsciously. If not, she would have solely used her L2 inner voice to mentally translate her L1 and L2 into understandable meanings.

Theme 2: Thinking in the L2

One of the interviewees noted that when given assignments from newly developed textbooks, such as songs and talks for listening exercises and reading textbook contents, she thought in the L2. Furthermore, she was stimulated to think in the L2 when she attempted to respond to the preparedness exercises.

Yeah… I try to repeat some words of audio tracks… I mean within the (l2) inner voice I do that. I pay attention to audios and interesting text and… and I like to do the task at home… I'm trying to talk in English in my mind by thinking, for example I say these things to myself and in my mind of course "Oh, I know this word, I understand the context, good I got it, I've heard this before," etc.

After the course, one of the learners shared her thoughts in the L2:

When I was doing my homework at home I was thinking in English… but before … doing homework was boring for me and… and I became tired… because I tried to translate sentences but now I just think about them in English…

Another learner's comment demonstrates that she was aware of the L2 inner voice:

I think my English improved a lot…because I learn the new things and tried a lot… and also there was ...there was something new, I mean experiencing inner voice… altogether I feel I was successful…

Theme 3: Stimuli for L2 Utterances

The learners' descriptions indicate that utilizing L2 in all the resources increased their awareness of the L2 necessity in the classroom, which in turn helped them enhance their L2 competency. Moreover, the answers that follow demonstrate: (1) the learner's spontaneous L2 speech in L2 contexts; (2) their inability to reflect in their L2 because of time limitations before responding in front of the class seems to have contributed to the development of their inner voice in L2.

Um… thinking… yeah… I used to talk without first thinking in my mind in English… there were some tasks encouraged us to prepare our talks in our minds before … talk about them.

I want to find words to say... Looking back, I don't believe I did this while I was conversing in Persian and translating what I hear English. I mean… I did not translate.

As I remember the questions and answers in the class, I think I responded in English without thinking in Persian after my teacher ask question in English…

The last response demonstrates the L2 stimulus, or target language settings, which prompted the learner to quickly think and speak in the same language. Additionally, this learner's apparent improvement in L2 proficiency allowed her to do so intellectually. If not, she could have mentally translated between the L1 and L2 using the L2 inner voice. It's interesting that this learner recognized this type of L2

stimulus:

> *Uh, I understand, I could speak in English more easily and faster than before. Yeah, several words come back in my head . . . for example when… when I watch the movie. Well I remembered many things I learned in past. If I hear them again, I quickly remember.*

Theme 4: Exposure to L2

The answer of the question, "What is the practical application of inner voice?" can be based on examining every learner. It appears that the L2 inner voice aids or directs students toward speaking and thinking naturally in the target language. In particular, while thinking and speaking in the target language on their own, learners may use the L2 inner voice rather than the L2 inner speech because of their L2 improvement in exposure to interactive exercises provided in the newly developed textbook. Therefore, the response to the question, "How does the L2 inner voice improve?" seems to be that the L2 inner voice develops spontaneously and is further developed by L2 stimuli as target language proficiency rises.

These learners' replies illustrate how exposure to a second language facilitated the use of their inner voice:

> *Yeah, uh, when I listen to English songs and music and tracks and even when my teacher speaks mostly I understand meaning, I guess … uh…I better understand when I try to repeat what I listened in my mind.*

> *Well, I tried to prepare whatever I wanted to say at the class in my mind and … Uh… and of course in L2, because some tasks began with think about that or this …*

> *I think the audio visual exercises are better because when I do them I think in English in my mind more.*

Theme 5: Conscious Imitation of L2 Pronunciation

A few of the students stated that they thought in their second language while imitating what they heard in English audio recordings. One of the students explained his L2 thinking during the interview:

(While listening to the audio activities), I tried to imitate terms that I knew before but you know it was hard to repeat difficult new words.

This response demonstrates the learners' conscious efforts to evaluate her L2 vocabulary knowledge by identifying the words she was familiar with from audio recordings. In particular, the learner seemed to use both the L2 inner speech, which helped her assess her L2 words, and the L2 inner voice, which helped her mentally flash back the words she knew, when she listened to engaging audios in the target language. This suggests that the authentic L2 words on audio resonated in the learner's mind as the L2 inner voice in the manner of the authentic L2 word pronunciation.

Knowing how important it was to develop their L2 proficiency, or at least what they had acquired in this course, the learners made an effort to identify L2 sounds throughout this time to assist in their memory of the target language expressions or phrases whenever they were subjected to the new textbook's activities. Other comments that supported these assertions include the following:

Well I repeated … the words and… and terms I learnt before in English again and again in my head.

I just repeating this to myself, even in... I attempted to listen for the words I remembered as I was doing activities.

Yeah, I do attempt to memorize phrases and, you know, I'm trying to continue this by doing exercise and practice a lot.

Theme 6: Mental Assessment of L2 Use

In addition, learners stated during the interview that they were using their L2 inner voice to recall what they felt in the L2 to assess their responses and utterances to the tasks. More specifically, the learners believed what they felt resonated in their minds as the L2 inner voice, or the authentic, right L2 phrases, when they recalled the L2 from the interactive tasks. Additionally, one of the learner's responses to the spontaneous interview questions such as "Do you use the inner voice while doing different tasks?" and the following questions such "Do you repeat L2 words phrases in your head?" was:

Yeah, I tried to keep vocabularies in my head], right and… you know I try to this in the classroom and out of classroom and yes while doing tasks… Uh… I try to do things in our book… I mean think about things in English and I guess now I improve a lot.

When repeating the L2 words in her mind, which she views as the helpful manner and which she feels helps her contrast, assess, and modify her L2 usage, this learner emphasizes how she actively employs her L2 inner voice for self-regulating. Additionally, when speaking in the target language, a different learner showed active involvement in her L2 inner voice:

Well… I think about something I want to say in my head… and … correct it … prepare it… before I start to speak in class. You I want to become sure I say something that is true…

These data analysis results indicate that the answer to the question, "What is the main application of the L2 inner voice?" is an innate cognitive direction to its proper L2 usage for self-assessing and modification when thinking and speaking the target language.

The qualitative findings, which revealed themes such as spontaneous L2 use, thinking in L2, stimuli for L2 utterances, exposure to L2, conscious imitation of L2 pronunciation, and mental assessment of L2 use, closely align with the quantitative results from the inner voice questionnaire. For example, participants in the experimental group reported an increase in spontaneous thinking in English, particularly while engaging with media or completing tasks—this echoes the significant improvements observed in their post-test scores. Similarly, the theme of exposure to L2, where learners described internalizing language structures through repeated interaction with the new materials, correlates with the enhanced inner voice scores in the experimental group. These findings suggest that the instructional intervention not only improved measurable outcomes, but also promoted deeper cognitive engagement with English, allowing learners to more naturally integrate the language into their thought processes. The connection between both sets of data highlights the effectiveness of the new materials in fostering both quantitative improvements and qualitative shifts in how learners engage with their L2 inner voice.

5. Discussion

This study aimed to investigate the impact of newly developed materials on enhancing the inner voice of Iranian EFL learners. The key research questions guiding this study were as follows:

1. Does the newly developed materials have a significant impact on enhancing the inner voice among Iranian EFL learners compared to the current materials?

2. How do Iranian EFL learners perceive the impact of the newly developed materials on the enhancement of their inner voice?

These questions sought to explore the relationship between the learning materials and inner voice, which previous research has identified as an essential cognitive process in language learning (De Guerrero, 2018; Tomlinson, Burns, & Richards, 2001).

The results demonstrated a significant impact of the newly developed materials on the inner voice of the experimental group of learners. The textbook incorporated activities that were specifically designed to engage learners' inner voice, such as silent mental rehearsals, reflective tasks, and self-talk exercises. These types of exercises are rooted in the text-driven approach (Tomlinson, 2003), which emphasizes interaction with language at a cognitive level through internal verbalization.

Overall, these findings indicate that the new materials not only improve learners' inner voice, but also promote a deeper cognitive and emotional engagement with the language. This aligns with the growing recognition that inner speech is integral to internalizing and processing language efficiently (Tomlinson, 2020). The materials facilitated cognitive immersion in the target language, allowing learners to engage in more meaningful language use.

The enhancement of the inner voice can be explained through several techniques embedded within the newly developed materials. These materials actively encouraged learners to engage in silent verbal reflection, which is crucial for cognitive processing in language acquisition. Tasks like visualizing conversations, internally rehearsing responses, and reflecting on emotions linked to language use helped learners strengthen their ability to think in English. These activities, designed in line with Tomlinson's (2003) theory of language learning, created opportunities for learners to develop mental representations of the language through inner voice, which is

essential for understanding and applying new linguistic structures.

Moreover, the textbook promoted multimodal engagement by incorporating visual, auditory, and emotional elements into the learning process. This approach helped learners to rehearse and verbalize English in their minds during complex tasks, leading to improved use of their inner voice. By addressing different learning modalities, the materials provided learners with multiple ways to internalize language, fostering inner voice engagement.

The statistical findings from the Internal Representations Questionnaire (Roebuck & Lupyan, 2020) provided strong quantitative evidence that the experimental group demonstrated significantly greater improvements in inner voice compared to the control group. The clear linear relationship between pre-test and post-test scores in both groups confirmed that the newly developed materials had a substantial impact on enhancing the inner voice of the learners.

The qualitative data collected from interviews with learners further supported the quantitative findings. Learners in the experimental group reported a noticeable increase in their use of the inner voice, particularly during challenging tasks or when they were reflecting on complex language structures. Several participants described using silent self-talk to prepare for class discussions or mentally rehearsing language during listening activities, which directly contributed to the higher post-test scores observed in the experimental group.

The qualitative findings provided additional insight into how the newly developed materials helped learners develop their inner voice. Some learners explained that they became more aware of their inner voice after completing tasks that prompted them to reflect silently before responding. This heightened awareness was a critical factor in their ability to use English more confidently and fluently in both classroom and real context.

The practical implications of these findings are particularly relevant for EFL instructors and curriculum designers. The results show that structured tasks designed to foster inner voice can have a profound impact on learners' cognitive engagement with the target language. Instructors can incorporate mental rehearsal activities where students silently rehearse language responses before speaking aloud, which can be particularly useful during speaking exercises, allowing learners to mentally practice

constructing sentences before participating in class discussions. Including reflective tasks where students silently think about language use in real-life contexts can further stimulate their inner voice.

Additionally, the use of visual and auditory stimuli, such as videos or audio clips, can prompt learners to internalize what they hear and engage in inner voice. Instructors can ask learners to mentally summarize or paraphrase these materials before producing written or spoken responses. Personalization of tasks also plays a vital role, as encouraging students to connect personal experiences with language tasks fosters deeper emotional and cognitive engagement, thereby enhancing their inner voice.

6. Conclusion

There have been large bodies of research involved with English materials development, evaluation, and implementation; however, very few were concerned with language learners' inner voice. The significance of the study lay in drawing the attention of practitioners to the psychological needs of EFL learners such as inner voice which are essential components of learning.

The findings of the present study revealed significant differences between the control and experimental groups' inner voice. The results of this study can assist ELT practitioners and instructors in better understanding the requirements of EFL learners as well as the potential impacts of the content on learners' inner voice. Researchers with an interest in the subject matter might also investigate whether more internal and external research could corroborate the findings and determine whether teachers' performance and motivation could be improved via the use of newly developed materials.

It may also be necessary to do more research to determine the effects of developing online resources for EFL students. Data on the effects of material development on EFL learners' inner voice underwent investigation in this study; more research may be conducted to examine how the text-driven approach to material development may promote various psychological factors in EFL learners. Finally, it is advised to do more research on the impact of using materials developed by a text-driven method in EFL classrooms in light of the study's findings. Further researches

are required to determine the impact of this method of material development on the abilities of EFL learners at various levels (primary, intermediate, high school, etc.) and on their language competency.

References

Anderson, J. R. (2005). *Cognitive psychology and its implications*. Macmillan.

Bae, J., & Bachman, L. F. (2010). An investigation of four writing traits and two tasks across two languages. *Language Testing, 27*(2), 213-234.

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Sage Publications.

Creswell, J. W., & Poth, C. N. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed.). Thousand Oaks, CA: SAGE Publications.

De Guerrero, M. C. (2018). Going covert: Inner and private speech in language learning. *Language Teaching*, *51*(1), 1-35.

Dornyei, Z. (2007). *Research methods in applied linguistics*. Oxford university press.

Ellis, R., & Shintani, N. (2013). *Exploring language pedagogy through second language acquisition research* (1st ed.). Routledge

Gabryś-Barker, D. (2015). Communicating with oneself: On the phenomenon of private/inner speech in language acquisition. In *New Media and Perennial Problems in Foreign Language Learning and Teaching* (pp. 115-130).

George, D., & Mallery, P. (2020). *IBM SPSS statistics 26 step by step: A simple guide and reference*. Routledge.

Gilmore, A. (2007). Authentic materials and authenticity in foreign language learning. *Language teaching, 40*(2), 97-118.

Khanzadeh Darabi, A., & Memari Hanjani, A. (2024). The comparative impact of reasoning gap tasks and opinion gap tasks on young EFL learners' classroom engagement. *Curriculum Research Journal*, *13*(4), 56.

Lantolf, J. P. (2000). *Going out of my head! Private speech and SLA* Keynote address presented at Language in the Mind Conference, National University of ai Singapore, 3-8 September.

Lee, J. (2006). *Talking to the self: A study of the private speech of adult bilinguals*. The University of Wisconsin-Madison.

Lee, J. (2008). Gesture and private speech in second language acquisition. *Studies in Second Language Acquisition*, *30*(2), 169-190.

Mackey, A., Ziegler, N., & Bryfonski, L. (2016). From SLA research on interaction to TBLT materials. In *SLA research and materials development for language learning* (pp. 103-118). Routledge.

Mickan, P., & Lopez, E. (2017). *Text-based research and teaching: A social semiotic perspective on language in use*. Springer.

Pisharady, A. S., & JG, R. K. (2021). Task Based Approach-A New Dimension to Language: What, How and Why? An Innovative Strategy for the New Millennium. *Turkish Online Journal of Qualitative Inquiry*, *12*(9).

Quintana, J. (2003). *PET practice tests: Practice tests without key*. OUP Oxford.

Resnik, P. (2021). Multilinguals' use of L1 and L2 inner speech. *International Journal of Bilingual Education and Bilingualism*.

Richards, J. C., & Renandya, W. A. (2022). *Methodology in Language Teaching: An Anthology of Current Practice.* Cambridge University Press.

Park, H. O. (2014). Developing English language teaching materials using text-driven approach. *Foreign Studies, 27*, 61-96.

Roebuck, H., & Lupyan, G. (2020). The internal representations questionnaire: Measuring modes of thinking. *Behavior Research Methods*, *52*(5), 2053-2070.

Scott, V. M., & Fuente, M. J. D. L. (2008). What's the problem? L2 learners' use of the L1 during consciousness-raising, form-focused tasks. *The Modern Language Journal*, *92*(1), 100-113.

Tomlinson, B. (2000). The Role of the Inner Voice in Language Learning. *Applied Language Language Language Language Learning Learning Learning Learning*, *11*(1), 123-154.

Tomlinson, B. (2003). Developing principled frameworks for materials development. *Developing materials for language teaching*, 107-129.

Tomlinson, B. (2009). Principles and procedures of materials development for language learning. *Metodologias e Materiais para o ensino do Português como Língua Não Materna*, 45-54.

Tomlinson, B. (2011). *Materials development in language teaching*. Cambridge University Press.

Tomlinson, B. (2016). The importance of materials development for language learning. In *Issues in materials development* (pp. 1-9). Brill.

Tomlinson, B. (2018). Text-driven approaches to task-based language teaching. *Folio, 18*(2), 4-7.

Tomlinson, B. (2020). Assisting Learners in Orchestrating Their Inner Voice for L2 Learning. *Language Teaching Research Quarterly, 19*, 32-47.

Tomlinson, B., Burns, A., & Richards, J. (2001). *Materials development*. the Cambridge.

Tomlinson, B., & Masuhara, H. (2017). *The complete guide to the theory and practice of materials development for language learning*. John Wiley & Sons.

Van den Branden, K. (2007). Second language education: Practice in perfect learning conditions. In R. DeKeyser (Ed.), *Practice in a second language: Perspectives from applied linguistics and cognitive psychology* (pp. 161-179). Cambridge University Press.

Wang, L.-C., & Hyun, E. (2009). A study of sociolinguistic characteristics of Taiwan children's peer-talk in a Mandarin—English-speaking preschool. *Journal of Early Childhood Research, 7*(1), 3-26.