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Investigating Iranian EFL students' perceptions towards incorporating multiple-intelligences based tasks into their classroom activities

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Abstract

Studying a foreign language in a rewarding and motivating atmosphere will create a perfect setting to enhance language proficiency. It appears that course books and class activities are crucial in this context. This experimental research aimed to find the efficacy of supplementary materials designed based on multiple intelligences on learners' attitudes towards classroom activities (enjoyment, engagement, choice, and challenge). To that end, a two-phase study was planned. First, the researchers developed tasks for each lesson of *Vision* series, the book taught in the high schools of Iran. Then, the experimental groups (N=60) were exposed to the designed tasks and the course book while the control group (N=60) were exposed just to the course book for four months The Babel proficiency test, along with the translated edition of the Students' Perceptions of Classroom Activities Scale was given to the experimental and control group participants as the pretest and posttest to examine the impact of the developed tasks on their perceptions of classroom activities. The results of multivariate analysis of variance (MANOVA) indicated that the designed tasks had positive and significant effect on the students' interests, challenge, choice, and joy.

Keywords: Classroom activities, High school Students' Perceptions, Multiple Intelligences Based Tasks, Supplementary Materials

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1. Introduction

The term material can be attributed to anything that is used by instructors or students to facilitate development of language. Materials development refers to all the different processes in developing and using materials for language educating and teaching. Such a development includes evaluating materials, adapting materials, exploiting materials, developing and producing materials (Tomlinson, 2016). Materials seem to be influential in shaping students' attachment to the class and determining their different kinds of intelligences (Tomlinson, 2019). They all fall within the realm of multiple intelligences. The history of multiple intelligence was originated from the concept of social intelligence (Balawi, 2011). Multiple intelligence (MI) has become a topic of interest since the role of emotions and metacognitive abilities of students' have been highlighted. It can help researchers to define human effectiveness from social perspective and the capacity of individuals to act purposefully (Jarwan, 2007).

Task is an activity which is designed for achieving learning goals. The notion of task is fundamental in numerous theories of teaching and learning (Tomlinson, 2019). Classroom activities are the collections of different tasks and using different materials. Choosing appropriate materials can determine learning goals and how these goals will be demonstrated. In teaching a second language, using a variety of tasks can make the process of learning more communicative and enjoyable (Tomlinson, 2011).

Classrooms held at schools of Iran may not lead to students' productivity in using English language in a communicative way. Thus, students may not be willing to take part in classroom activities, since they are not challenging and interesting. They also might not provide various options for learners to choose and students do not enjoy doing them (Doyle, 2006). A part of this problem can be tackled by the use of supplementary materials which are specifically designed to encourage students towards having positive perceptions in class and cause student success.

The present study thus was conducted to design tasks and supplement *Vision* books which are currently taught at high schools of Iran by using materials consisting of multiple intelligences to improve students' perception of their learning environment.

2. Review of the Related Literature

Over the last two decades there has been a great rise in the literature on materials development. As Evans & John (1998) argued, a materials developer should select materials properly from what is accessible. This is associated with some expertise that most of the teachers are not well prepared for. They should be creative with what is available. This can be exhibited through the content and the process. They should also try to modify activities to suit learners' needs. Differentiation is the process of modifying to cater the requirements of a variety of students (Garralda, 1999). Each student has their own personalized purposes, so the materials and instructions can be different (Graves, 2008). Materials and textbooks are about the content and it should be tailored according to learners' needs Materials developers should also supplement their contents by providing extra activities. For this, they need to design their own approach which is the nature of language learning and teaching. Design refers to specification of the content, role of teachers, learners and materials, and procedure that is the variability of educational tasks that can be drawn on (Richards, 2005).

Reviewing previous research indicates that there is not only one approach for learning which influences creating suitable materials. For example, Harwood (2010) proposes different principles for developing materials. The first principle is helping teachers to make their own decisions. The second principle is concentrating on the meaning of a text rather than focusing on the linguistic features, this is called moving from text to language. The third one is providing engaging content. Hence, material developers need to know their audience and provide tasks according to their interests (Harwood, 2010). Moreover, they should create content with intent to attract learners and provide a challenging environment for learning. Learners' development is another important feature in helping students to grow their abilities as language learners (Harwood, 2008).

Classroom activities should be helpful for developing learners' ability to interact fluently, accurately and suitably. Learners need to respond to an authentic stimulus, so the activities should be fully contextualized (Tomlinson, 2019). Tasks should also provide feedback for learners to find their own problems and regulate themselves. Learners need to monitor themselves before, during and after language production (Krashen, 1985).

Manca (2020) carried out a study focusing on task-based instructions as opposed to the presentation-practice-production method for English language instruction in two classes at a private school in southern Brazil. The research revealed that students utilizing task-based instructions exhibited more effective English language learning outcomes as they engaged in using the language to perform tasks, access information, solve problems, and discuss personal experiences. Ellis (2016) stresses that task-based language teaching is an instructional method which views language primarily as a tool for communication rather than as an object for analysis or manipulation.

The textbook holds significant importance in countries like Iran, where English is considered a foreign language. Learning English is a mandatory component of the Iranian curriculum. Prior to the Iranian Revolution, English-speaking teachers were hired to teach the language to students in order to establish the most effective learning atmosphere. However, following the Revolution in 1979, the system underwent significant changes due to various circumstances. With respect to the course books, it is important to note that English textbooks for schools in Iran are developed by the Ministry of Education under the name *Vision* series, and there are no viable substitutes. These course books are used in both private and public schools, with all instructors following the same curriculum. English language teachers are expected to cover one book per academic year, divided into two semesters. Each semester consists of approximately sixteen weeks, with English language instruction provided in both terms. Essentially, each course book is divided into two equal parts, with each part covered within one term. Additionally, *Vision* 1 has four lessons, *Vision* 2 has three lessons, and *Vision 3* includes three lessons, all following the same structure.

Iranian students are required to study English for six years. However, the education they receive does not fully equip them with the necessary skills to use English proficiently or communicate confidently (Ghanizadeh & Jahedizadeh, 2015). Considering the students' difficulties in interacting in English with peers from different regions of Iran, it is evident that some of the challenges faced by teachers and learners may be attributed to the course books (Ananisarab & Mobasheri, 2009). Consequently, many teachers incorporate supplementary materials in their classes to make their own classes more challenging and enjoyable and help learners to have better achievement (Maghsoudi &

Khodamoradi, 2023).

Multiple intelligences (MI) has entered into the field of assessment, teaching and learning since thirty years ago. It has been associated with social intelligence (Stipek, 2002). Individuals attempt to resolve issues by utilizing their dominant intelligence (Temiz, 2007). Educational establishments face the challenge of equipping pupils with the essential skills and abilities to cater the demands of the modern world, particularly in the context of a global environment that highly values different cultures and abilities (Sousa, 2006). In order to achieve this objective, it is imperative to adapt and revise the curriculum accordingly (Mustikawati & Astuti, 2021). Magfirah and Thahir (2021) emphasized that multiple intelligences are fundamental to a person's overall development, as they influence their understanding of themselves, their abilities to adapt, their emotions, motivations, attitudes, and their control over their strengths and weaknesses. Consequently, it is crucial to incorporate teaching strategies that focus on developing different intelligences. These strategies allow students to process the information presented and make personal connections, while also providing a refreshing change of pace to keep them engaged (Sousa, 2006). Activities that encourage personal reflection and expression, like making personal associations and sharing experiences, are highly recommended (Ellis, 2003). Additionally, offering students choices and allowing them to make decisions about their learning experiences can be beneficial.

Learning environment is a broad term which refers to anything happening in classroom, department or college (Rukban, Khalil, & Al-Zalabani, 2010). It is the district, culture, and condition that students learn in. It also refers to other elements like learners' characteristics such as the way of their interaction, their motivation, individual differences and educational system. Arisoy (2007) argues that learning atmosphere has two facets; the first one is physical setting like spaces, lighting, desks and chairs that affects learners' safety and comfort. The next aspect is psychological environment which is the social quality of the classroom.

The students' insights towards their learning environment have been studied in different levels (Arzuman, Yusoff, & Chit, 2010). They can be a basis for optimizing and modifying educational setting. Several Studies have revealed that there is a significant

positive connection between learners' perceptions of classroom activities and their achievement (; Arisoy, 2007; Aghamolaei & Fazel, 2010; Ghanizadeh & Jahedizadeh, 2015). Moreover, it can help teachers to find best teaching strategies to improve educational environment by providing complete and detailed information about educational process (Garralda, 1999).

Teachers can enhance students' learning by focusing on topics that they find enjoyable. However, it is crucial to create an interesting learning environment where interaction among individuals takes place. In addition to traditional reading and listening activities, active participation in discussions, hypothesis formation, and sharing opinions contribute to effective learning (Moore, 2011). In this dynamic process, learners are not passive recipients of information; instead, they actively construct or rediscover knowledge (Acat, 2006). According to Moore (2011), these activities can motivate learners in their learning environment and it is facilitator as students learn by doing and experience what they want to achieve. It also provides opportunity for teachers to have immediate feedback and arouse a high degree of learners' interest and engagement.

Gentry and Gable (2001) defined a dimension for classroom activities named as *My Classroom Activities* (MCA). According to this dimension, there are four important scales: the first one is interest which refers to positive moods for particular topics, subjects, or activities. Next is challenge which is about engaging learners and requiring extra effort. The third one is choice. It is to give learners the right to choose informative choices and manage their own learning. Enjoyment is the other scale which is about providing learners with pleasure and sense of satisfaction in the classroom.

In the process of education, incorporating opportunities for students to derive pleasure from their learning experiences can greatly contribute to the development of a lifelong passion for acquiring knowledge. By demonstrating that learning can be enjoyable and exposing students to a variety of materials and activities, individuals can discover something that resonates with their personal interests and preferences (Ciuti et al., 2012). Achieving a state of immersive and pleasurable learning requires not only the acquisition of essential learning skills but also the ability to fully engage with the subject matter (Wang et al., 2020). Numerous studies have unequivocally demonstrated that the advantages of

learning for pleasure extend far beyond the realm of literacy-related outcomes (Hattieh, 2009; Hussein, 2018). In addition to enhancing reading comprehension, critical thinking abilities, and vocabulary expansion, learning for pleasure can yield cognitive benefits, foster social interactions through discussions and sharing of reading experiences, promote emotional and psychological well-being, encourage healthy behaviors, and provide a sense of personal enjoyment (Mak & Fancourt, 2020).

Considering the above points and the need for developing engaging and pleasant learning experience in Iranian high school English classes, the primary objective of the present study was designing tasks to empower instructors to teach with multiple intelligences. The subsequent step involved carrying out these tasks in actual classrooms to assess the impact of such tasks empirically. In pursuit of this objective, the following research question was proposed:

- What is the perception of Iranian high school students' towards the tasks/ supplementary materials for *Vision* Series by using multiple intelligences in terms of joy, interest, choice, and challenge?

3. Methodology

3.1. Participants

A total of one hundred twenty students participated in this research, with sixty learners in the control group and the remaining sixty in the experimental group across three high schools in Mashhad. Convenience sampling technique was used to recruit the paticipants. The participants' ages ranged from 14 to 16, and they were Iranian students in the tenth, eleventh, and twelfth grades covering the *Vision* series in the formal education system. To fulfill the primary requirement of the experimental study, the Babel English Language Placement Test (BELPT) was applied. The demographic information of the members is detailed has been detailed below .

Table 1.

Analytical Data of the Members

Number	120
Gender	Males
Language	Persian
Year	2023

3.2. Instruments

3.2.1. Students' Perceptions of Classroom Activities Scale

To obtain students' perspectives on classroom activities, the researchers utilized the adapted form of the 'Students Perceptions of Classroom Activities' scale created by Gentry and Gable (2001), which was translated into Persian and verified by Ghanizadeh and Jahedizadeh (2015). Validity evidence for construct interpretation was investigated through confirmatory factor analysis. A *chi-square/df ratio* (2.38) and the *RMSEA* (.062) as well as the *GFI* (. 78) were indicative of model fit. Furthermore, all items had accepted factor loadings. The Cronbach's alpha estimates for each perception ranged from. 71 to. 86 (interest =. 86, challenge= .73, choice= .71, joy= .79). Additionally, all items showed satisfactory factor loadings. The Scale consists of thirty-one statements estimating four aspects (challenge, interest, joy, and choice) through a 5-point Likert-type answer scale (See Appendix). It was used as pre-test and post-test.

3.2.2. The Paper Version of Babel English Language Placement Tests (BELPT)

The printed edition of the Babel English Language Placement Tests (BELPT) was employed to decide on language proficiency level of the participants. It was utilized to assign the students into experimental and control groups, ensuring their homogeneity. The testing procedure required 60 minutes of student time and consisted of multiple-choice questions that assessed their correct answers across various skills, grammatical structures, and dialectal choices in context (Franz, 2008). According to Sharifi, Ghanizadeh and Jahedizadeh (2017), the test displayed acceptable consistency Cronbach's alpha=.81) and validity evidence (.83*).*

3.3. Procedure

First, the researchers developed tasks for *Vision* Series lessons. *Vision* series include three books; *Vision* one for tenth Grade include four lessons, *Vision* two for eleventh grade encompasses three lessons, and *Vision* three for twelfth grade has three lessons. The assignments were grounded on Jones (2017) guideline and the taxonomy of language learning activities for multiple intelligences provided by Christison (1997). The researchers asked experts and university instructors to check the tasks during the process of designing and consider whether items were missing or whether any items could be improved or removed. For putting the tasks in order, the researchers paid attention to the extent to which each task was related a specific skill. Some tasks were in Listening part while others were related to Speaking, Reading, or Writing part. Moreover, some tasks fell in two or three integrated skills like Reading & Writing. In fact, there were some tasks that helped learners to integrate skills especially their comprehension and production ability.

Next, the researchers utilized the language placement test named as BELPT to determine the language proficiency of the learners. Students' Perceptions of Classroom Activities Scale was also employed as pre-test. After that, learners were assigned into control and experimental groups based on the results. Each group had sixty members; twenty students were in grade ten, twenty in eleventh grade and others were in grade twelve. Then, the tasks were implemented in experimental groups for sixteen sessions during four months as the supplementary materials for the main textbooks. In fact, different types of tasks which were designed implemented in experimental groups. There were some matching tasks which helped learners to use their spatial, verbal, and interpersonal intelligences. For instance, the task asked learners to read the texts and look at the photos and match each text to the picture. Then, learners talked to their partners and expressed their logic for matching texts and their pictures. There were also some comparison tasks that first required learners to write a list about the characteristics of a healthy lifestyle and then compare their own list with their partners. Finally, learners had to combine the lists and give them to their teacher. In this way, learners could use their logical, verbal, and interpersonal intelligences. The supplementary material also contained tasks based on common problems like pollution, relationships and so on. For example, a task asked learners to think about a town center where there was too much traffic. Learners should

think about three alternative solutions for this problem; then list the advantages and disadvantages of each alternative and decide which one was the most innovative one by giving reasons. This task could be helpful for learners to use logical, naturalistic, and intrapersonal intelligences. After every unit, learners were requested to do the tasks whether in the class or at home. The assignments were checked in the class by the instructor who was the same in all classes or through group exercises if required. However, in the control groups there were not any supplementary materials and learners just studied the course books *(Vision)* without doing any extra tasks. At the end, the scale was used to obtain the perceptions of both groups regarding the activities they engaged in during the course

3.4. Data Analysis

In order to guarantee the uniformity of the two groups regarding their language proficiency and their perceptions of their learning environment activities, an independent samples *t*-test was conducted utilizing SPSS version 22. To check whether the implemented tasks in experimental group resulted in significant differences in the variables, multi-level analysis of variance MANOVA was utilized.

4. Results

To check the normality of data distribution, the Kolmogorov-Smirnov test was employed. This test is used to check whether the distribution deviates from a comparable normal distribution. If the p-value is non-significant (p>.05), we can say that the distribution of a sample is not significantly different from a normal distribution, therefore it is normal. If the p-value is significant (p<.05) it implies that the distribution is not normal. Table 2 presents the results of the Kolmogorov-Smirnov test. As can be seen, the obtained sig value for all variables is higher than .05. Therefore, it can safely be concluded that the data is normally distributed across all four variables.

Table 2.

Kolmogorov-Smirnov Test

	Kolmogorov-Smirnov[a]		
	Statistic	df	Sig.
Perceptions	.07	179	.06
BABEL	.08	179	.08

4.1. The Results of Pretests

4.1.1. Students' Proficiency Level

4.1.1.1. Tenth Grade Students

To examine whether the two groups of tenth grade students were homogenous at the beginning of the study regarding their proficiency level, the Babel Test was administered. Table 3 presents the outcome of t-test on BELPT.

Table 3.

Descriptive Statistics of Tenth Grade Students' Proficiency level in Pretest

	Group	N	Mean	Std. Deviation	Std. Error Mean
BabelTest	Control	20	13.20	1.67	.37
	Experimental	20	12.45	1.50	.33

The average points for the control (M=13.20, SD=1.67) and experimental (M=12.45 SD=1.50) groups appear to be quite similar. Nevertheless, an independent samples t-test was conducted to verify the similarity of the two groups as demonstrated below.

Table 4.

The Results of T-test on Tenth Grade Students' Proficiency Levels in Pretest

		Levene's Test for Equality of Variances						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Babel Test	Equal variances assumed	.09	.75	1.49	38	.14	.75	.50
	Equal variances not assumed			1.49	37.57	.14	.75	.50

Table 4 indicates that there was not a statistically significant difference between the two groups of tenth grade students regarding their proficiency level (t= 1.49, p> .05).

4.1.1.2. Eleventh Grade Students

It is evident that the average scores show minimal difference between the control group (M=12.65, SD=2.00) and experimental group (M=17.50, SD=23.25) Nevertheless, an independent samples t-test was conducted to verify the similarity of the two groups as presented in Table 5 .

Table 5.

Descriptive Statistics of Eleventh Grade Students' Proficiency level in Pretest

	Group	N	Mean	Std. Deviation	Std. Error Mean
BabelTest	Control	20	12.65	2.00	.44
	Experimental	20	17.500	23.25	5.19

It is evident that there are varying mean scores between the control group (M=12.65, SD=2.00) and experimental group (M=17.55 SD=23.25) prompting the use of an independent samples t-test to verify the similarity of the two groups.

Table 6.

The Results of T-test on Eleventh Grade Students' Proficiency Levels in Pretest

		Levene's Test for Equality of Variances							
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Difference	Error
Babel Test	Equal variances assumed	3.21	.08	-.93	38	.35	-4.90	5.21	
	Equal variances not assumed			-.93	19.28	.35	-4.90	5.21	

Table 6 demonstrates that there was not a statistically significant difference between the groups of eleventh grade students on their proficiency level (t= 0.93, p> .05).

4.1.1.3. Twelfth Grade Students

The results of the t-test on the Babel Test for the twelfth level students are displayed below.

Table 7.

Descriptive Statistics of Twelfth Grade Students' Proficiency level in Pretest

	Group	N	Mean	Std. Deviation	Std. Error Mean
BabelTest	Control	20	12.85	2.00	.44
	Experimental	20	12.90	1.86	.41

It is evident that the average scores show some difference between the control group (M=12.85 SD=2.00) and experimental group (M=12.90, SD=1.86) Nevertheless, an independent samples t-test was conducted to verify the similarity of the two groups as presented in Table 8 .

Table 8.

The Results of T-test on Twelfth Grade Students' Proficiency Levels in Pretest

		Levene's Test for Equality of Variances						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Babel Test	Equal variances assumed	.01	.89	-.08	38	.93	-.05	.61
	Equal variances not assumed			-.08	37.78	.93	-.05	.61

Table 8 indicates that the proficiency levels of the twelfth-grade students in both groups do not show a statistically significant difference (t= 0.08, p> .05).

4.1.2. Students' Perceptions of Classroom Activities

4.1.2.1. Tenth Grade Students

To check whether the two groups of tenth grade students were homogenous at the beginning of the study regarding their perceptions of classroom activities, the questionnaire was administered to both control and experimental groups. Table 9 shows the outcomes of t-test on the questionnaire.

Table 9.

Descriptive Statistics of Tenth Grade Students' Perceptions of Classroom Activities in Pretest

	Group	N	Mean	Std. Deviation	Std. Error Mean
IntPre	Control	20	13.40	1.81	.40
	Experimental	20	13.75	1.55	.34
ChaPre	Control	20	15.55	1.95	.43
	Experimental	20	15.25	2.42	.54
ChoPre	Control	20	12.30	1.70	.39
	Experimental	20	11.45	1.39	.31
JoyPre	Control	20	11.95	1.57	.35
	Experimental	20	11.80	1.60	.35
PerPre	Control	20	53.20	4.25	.95
	Experimental	20	52.25	4.03	.90

The mean points for the control (M=53.20, SD=4.25) and experimental (M=52.25 SD=4.03) groups exhibited slight differences. In order to determine the significance of these small variances, a one-way between-groups multivariate analysis of variance (MANOVA) was conducted. The study included four dependent variables: Interest, Challenge, Joy, and Choice in perceptions of class activity, with the independent variable being group (experimental and control). Hypothesis testing was carried out and they were not met any major issues. MANOVA outcomes displayed below indicated that there was no statistical significant diferences between the groups in relation to the dependent variables analyzed.

Table 10.

The Results of MANOVA on Tenth Grade Students' Perceptions of Classroom Activities

Effect	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Wilks' Lambda	.96	.81[b]	4.00	35.00	.49	.02
a. Design: Intercept + Groups						
b. Exact statistic						

4.1.2.2. Eleventh Grade Students

In order to ensure the similarity of eleventh grade students at the commencement of the research regarding their views on classroom activities, the survey was also conducted among both the control and experimental groups. The findings of the t-test on the survey are presented in Table 11 .

Table 11.

Descriptive Statistics of Eleventh Grade Students' Perceptions of Classroom Activities in Pretest

	Group	N	Mean	Std. Deviation	Std. Error Mean
IntPre	Control	20	14.10	2.149	.48
	Experimental	20	13.35	1.92	.43
ChaPre	Control	20	15.55	2.52	.56
	Experimental	20	14.70	2.29	.51
ChoPre	Control	20	12.15	1.38	.31
	Experimental	20	12.05	1.23	.27
JoyPre	Control	20	13.00	2.31	.51
	Experimental	20	11.70	1.83	.41
PerPre	Control	20	54.80	4.78	1.07
	Experimental	20	51.80	3.91	.87

It is evident that there were slight differences in the mean scores for the control (M=54.80; SD=4.78) and experimental (M=51.80 SD=3.91) groups. In order to determine if these small variances were indeed significant, a one-way between-groups multivariate analysis of variance (MANOVA) was conducted. The independent variable was the four dependent variables. The outcomes indicated that there was no statistically significant difference between the groups.

Table 12.

The Results of MANOVA on Eleventh Grade Students' Perceptions of Classroom Activities

Effect	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Wilks' Lambda	.81	.70[b]	4.00	35.00	.39	.01
a. Design: Intercept + Groups						
b. Exact statistic						

4.1.2.3. Twelfth Grade Students

To check whether the two groups of twelfth grade students shared similar perceptions at the beginning of the study regarding classroom activities, the questionnaire was administered to control and experimental groups. Table 13 shows the results of t-test on the questionnaire.

Table 13.

Descriptive Statistics of Twelfth Grade Students' Perceptions of Classroom Activities in Pretest

	Group	N	Mean	Std. Deviation	Std. Error Mean
Intpre	Control	20	12.55	1.66	.37
	Experimental	20	13.15	1.63	.36
ChaPre	Control	20	15.05	1.84	.41
	Experimental	20	15.05	2.92	.65
ChoPre	Control	20	12.10	1.25	.28
	Experimental	20	11.80	1.50	.33
JoyPre	Control	20	11.50	1.63	.36
	Experimental	20	12.20	1.85	.41
PerPre	Control	20	52.20	4.61	1.03
	Experimental	20	53.20	4.38	.98

It is evident that there was a slight difference in the mean of the control (M=52.20 SD=4.61) and experimental (M=53.20, SD=4.38) groups. In order to determine if these small discrepancies were statistically significant, a one-way between-groups multivariate analysis of variance (MANOVA) was conducted. The results indicated that there was no statistically significant difference between the two groups.

Table 14.

The Results of MANOVA on Twelfth Grade Students' Perceptions of Classroom Activities

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
	Wilks' Lambda	.90	.82	4.00	35.00	.41	.03
a. Design: Intercept + Groups							
b. Exact statistic							

4.2. Research Question

What is the perception of Iranian high school students' towards the tasks/ supplementary materials for *Vision* Series by using multiple intelligences in terms of joy, interest, choice, and challenge?

4.2.1.1. Tenth Grade Students

The descriptive statistics for the components of perception of class activity are presented in the Table below, comparing the treatment and control groups in the posttest. It is evident from the Table that the mean points for all parameters are greater in the experimental group .

Table 15.

Descriptive Statistics of Perceptions of Class Activities

	Group	N	Mean	Std. Deviation	Std. Error Mean
Intpost	Control	20	12.55	1.79	.40
	Experimental	20	32.25	2.44	.54
ChaPost	Control	20	14.30	2.38	.53
	Experimental	20	36.60	2.81	.62
ChoPost	Control	20	11.65	1.26	.28
	Experimental	20	28.65	2.00	.44

JoyPost	Control	20	11.75	1.80	.40
	Experimental	20	28.30	2.31	.51
PerPost	Control	20	51.25	4.11	.92
	Experimental	20	125.80	6.25	1.39

Further inferential statistics was used to find the whether the differences between groups were statistically different. So, a one-way between-groups multivariate analysis of variance (MANOVA) was run. Prior to this, preliminary assumption testing was carried out revealing no significant issues. The MANOVA results displayed in Table 16 revealed a statistically significant difference between the two groups in terms of the combined dependent variables. The effect size is .86, signifying a substantial importance according to Cohen's F. This suggests that approximately 86 percent of the divergence in the learners' perceptions towards class activity can be explained by the treatment performed in the Treatment group.

Table 16.

The Results of MANOVA for Perception of Class Activities

Effect	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Wilks' Lambda	.14	53.34	4.00	36.00	.00	.86
a. Design: Intercept + Groups						
b. Exact statistic						

The subsequent examination conducted in Table 17 manifested that this discrepancy remained consistent for all four aspects of class activities: Challenge (F=193.12, p=.000, partial eta squared =.83), Interest (F=222.81, p=.00, partial eta squared =.85) Choice (F=211.33, p=.00, partial eta squared =.84), and Joy (F=215.49. p=.00, partial eta squared =.84).

Table 17.

MANOVA Table Indicating the Outcomes of Four Kinds of Perceptions across Control and Experimental Groups

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Groups	IntPost	20976.40	1	20976.40	222.81	.00	.85
	ChaPost	25908.10	1	25908.10	193.12	.00	.83
	ChoPost	16240.90	1	16240.90	211.33	.00	.84
	JoyPost	16040.02	1	16040.02	215.49	.00	.84

4.2.1.2. Eleventh Grade Students

The descriptive statistics of joy, interest, challenge, and choice in perception of class activity in the treatment and control groups in posttest are presented in Table 18. It is evident from the Table that the mean for all of the parameters are greater in the experimental group .

Table 18.

Descriptive Statistics of Perceptions of Class Activities

	Group	N	Mean	Std. Deviation	Std. Error Mean
Intpost	Control	20	14.95	2.52	.56
	Experimental	20	32.75	2.71	.60
ChaPost	Control	20	17.45	3.88	.86
	Experimental	20	36.15	1.92	.43
ChoPost	Control	20	12.15	1.38	.31
	Experimental	20	12.05	1.23	.27
JoyPost	Control	20	12.70	2.84	.63
	Experimental	20	29.10	1.97	.44
PerPost	Control	20	57.85	6.73	1.50
	Experimental	20	126.25	5.15	1.153

Using a one- way between-groups multivariate analysis of variance (MANOVA) the significance of this difference was sought. Prior to this, preliminary assumption testing was carried out; it showed no significant violations. The results of the MANOVA analysis, as shown in the table below, indicated a statistical significant difference between the two groups. The calculated effect size is .88; it is considered to be of substantial magnitude based on Cohen's F. It suggests approximately 88 percent of the deviation in the students' perception of class activities may be explained by the treatment employed in the study .

Table 19.

The Results of MANOVA for Perception of Class Activities

Effect	Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
Wilks' Lambda	.11	71.47	4.00	36.00	.00	.88
a. Design: Intercept + Groups						
b. Exact statistic						

The subsequent analysis conducted in Table 20 revealed the discrepancy remained consistent for all aspects of class activities.

Table 20.

MANOVA Table Revealing the Results of Four Types of Perceptions across Experimental and Control Groups

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Groups	IntPost	22752.90	1	22752.90	258.77	.00	.86
	ChaPost	28729.60	1	28729.60	290.69	.00	.88
	ChoPost	16810.00	1	16810.00	260.15	.00	.87
	JoyPost	17472.40	1	17472.40	233.55	.00	.85

4.2.1.3. Twelfth Grade Students

The descriptive statistics for challenge, interest, joy, and choice in perception of class activity across the treatment and control groups in posttest are presented in the table below. It is evident from the Table that the means of all parameters are greater in the treatment group compared to their control counterpart.

Table 21.

Descriptive Statistics of Perceptions of Class Activities

	Group	N	Mean	Std. Deviation	Std. Error Mean
Intpost	Control	20	13.85	2.03	.45
	Experimental	20	32.55	2.81	.63
ChaPost	Control	20	15.50	2.28	.51
	Experimental	20	36.05	2.62	.58
ChoPost	Control	20	11.65	1.34	.30
	Experimental	20	28.35	1.46	.32
JoyPost	Control	20	11.50	1.63	.36
	Experimental	20	21.20	1.85	.41
PerPost	Control	20	53.20	4.51	1.00
	Experimental	20	126.30	6.13	1.37

To determine the significance of the detected variations a one-way between-groups multivariate analysis of variance (MANOVA) was used. Prior to this, preliminary assumption testing indicated no major violations. The findings of the MANOVA showed

statistically significant difference between the two groups. The calculated effect size is.85, indicating a substantial magnitude based on Cohen's F. It suggests that approximately 85 percent of the deviation in learners' comprehension of class activity can be explained by the methodology employed in the treatment group.

Table 22.

The Results of MANOVA for Perception of Class Activities

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared
	Wilks' Lambda	.14	54.53	4.00	36.00	.00	.85
a. Design: Intercept + Groups							
b. Exact statistic							

The subsequent analysis conducted in the table below revealed that the distinction remained consistent across the four dimensions of class activities.

Table 23.

MANOVA Table Revealing the Outcomes of Four Kinds of Perceptions over Control and Experimental Groups

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Groups	IntPost	21529.6	1	21529.60	225.32	.00	.85
	ChaPost	26574.02	1	26574.02	232.74	.00	.85
	ChoPost	16000.00	1	16000.00	217.87	.00	.84
	JoyPost	17264.02	1	17264.02	217.26	.000	.84

5. Discussion and Conclusion

The results of this study revealed that tasks can significantly enhance learners' perceptions of classroom activities at the end of the semester. Aikenhead (2006) expounded that pupils' enthusiasm in learning is decreasing these days, which causes them to get separated from their real world. That is why they need some extra tasks which is designed based on their needs and interests. According to Mortiboys (2005), to listen to and acknowledge students is one approach to encourage their interest in their learning environment and make class more enjoyable. Moreover, the integration of listening and speaking tasks help learners to make a good relationship with others and increase their interpersonal and intrapersonal

intelligences. There are some tasks in the book which ask learners to role play and tell stories about their own experiences. They can give learners a sense of interest and enhance their linguistic intelligence.

Other researchers like Mercer (2019) argue that the teaching based on the multiple intelligences' origins can make the learning more long-lasting and help the students to establish more positive mindset towards their lessons in different areas. In line with the findings of these investigations, the results of this research showed that using multiple intelligences-based tasks in the classroom could enhance learners' interest toward learning.

In the modern world, it is expected from students to be active learners rather than passive recipients of the stimuli provided by the teacher. In this regard, several researches like Butler (2011) attest to the fact that multiple intelligences-based activities boost student interest and grab their attention by bringing more color and variety to the classroom. In line with this study, Hamurlu (2007) analyzed the students' attitudes and sense of enjoyment toward the impacts of the schooling based on multiple intelligences theory. Lessons were run through exercises based on this theory. The results indicated that students' attitudes and sense of joy increased in their learning Environment. Similarly, in an investigation conducted by Hajhashemi, Ghombavani, and Yazdi Amirkhiz (2011) the findings revealed applying multiple intelligences theory could give students a better attitude towards their learning. Such findings are consistent with what was obtained in the current study; using the tasks which are designed based upon multiple intelligences theory like role playing, doing the puzzles or watching movies to do the tasks can help learners enjoy their learning environment.

On the other hand, easy tasks may not make learners feel competent because there is no increase in the level of their skills; for example the tasks which ask learners to draw a picture for the new words or expressions they have heard, are easy for learners. Giving out difficult tasks could also lead to failure. For instance, output based tasks and tasks which ask learners to share the information on their cards so their group members could complete a schedule may lead to failure. The ideal level of difficulty for tasks is what allows students to see how much their skills have improved. In fact, developing educational tasks

that address multiple intelligences of learners not only helps teachers better fulfill the requirements of the students, but also motivate students to practice using their other intelligences in a challenging environment. By doing this, teachers can help learners develop and strengthen some of their weaker intelligences. In fact, teaching with multiple intelligences can completely boost the challenges in the classroom and promote learning achievement (Mahasneh, 2013).

One way of providing challenging tasks in the classroom is using open ended questions which ask learners to write about their own ideas. In this study, a wide range of challenging tasks such as real life tasks, comparison tasks, and problem solving tasks were designed for different learning styles and the findings obtained after the treatment are in line with the results of previous studies like Barrington (2004). Accordingly, multiple intelligences-based tasks can offer students a challenging learning environment and enhance language achievement. Further, offering students a variety of options can help them learn more deeply, apply concepts, and internalize new materials because pupils perform well when they are given opportunity to engage in the acquisition and processing of the things they want to learn (Gentry and Gable, 2001).

The findings of this research indicated that multiple intelligences-based tasks can provide opportunity for learners to select how and what they learn. For example, some tasks are designed in the way that can be done individually or in pair. Students are free to choose to answer alone or in the group. The resuls of the study align with those of previous research, showing similar findings. For example, Hanafin (2014) examined the correlation between vocabulary learning and teaching and multiple intelligences. The findings revealed learning lexicons considering multiple intelligences-based tasks can have positive effect on students' learning and provide opportunities for them to develop their abilities. Further, Franz (2008) stated that the students who have the opportunity to identify themselves in their preferences and actions, can have a better feeling toward their learning environment which results in creating a good classroom atmosphere.

The results of this study can be useful for materials developers to be mindful of distinctive variables influencing students' learning. They should provide tasks appropriate for different learners with distinctive intelligences. Instructors should consider individual

differences and provide different tasks for learners to make their classes more pleasant, interesting, and challenging in which learners have opportunity to choose appropriate tasks based on their needs and capabilities. Indeed, educators should assess the needs and interests of their students and offer a range of tasks to assist them in achieving their objectives. In fact, students attend language classes with the aim of improving their communication abilities. Therefore, tailored tasks can aid students in developing their communicative skills in alignment with their multiple intelligences.

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Appendix

Learners' Perception of Classroom Activities Questionnaire

حیطه		فعالیت	هرگز	بندرت	گاهی اوقات	معمولا	همیشه
علاقه	1	به کارهایی که در کلاسم انجام میدهم علاقه مندم.					
	2	من در کلاسم فرصت این را دارم تا کارهایی انجام دهم که به انجام آنها علاقه دارم.					
	3	آنچه در کلاسم انجام میدهم به من ایده هاو و جالبی می دهد.					
	4	به موضوعاتی که در کلاسم مطالعه میکنم علاقه مندم.					
	5	استاد مرا در فعالیت های یادگیری مورد علاقه ام مشارکت میدهد.					
	6	آنچه در کلاسم یاد میگیرم برایم جالب است.					
	7	به آنچه در کلاسم انجام میدهم علاقه مندم.					
	8	کلاسم به من کمک کرده تا زمینه های علاقه مندی خود را کشف کنم.					
چالش	1	فعالیت هایی که در کلاس انجام میدهم چالش برانگیز است.					

	2	در کلاسم باید به این فکر کنم که چگونه میشود مشکلی را حل کرد.							
	3	کتاب ها و وسایل کمک آموزشی در کلاسم چالش برانگیز است.							
	4	من خودم را با امتحان کردن چیزهای جدید به چالش میکشم.							
	5	کار من میتواند چالش برانگیز باشد.							
	6	به نظرم کاری که در این کلاس انجام میدهم سخت است.							
	7	من به چالش کشیده میشوم تا در کلاس بهترین عملکرد را از خود نشان دهم.							
	8	آنچه در کلاس انجام میدهم متناسب با توانایی هایم است.							
	9	این کلاس برایم دشوار است.							
انتخاب	1	اجازه دارم انتخاب کنم که در گروه کار کنم.							
	2	اجازه دارم انتخاب کنم که بصورت فردی کار کنم.							
	3	وقتی قرار است گروهی کار کنیم اجازه دارم همگروهی هایم را خودم انتخاب کنم.							
	4	استاد به من اجازه میدهد تا پروژه هایم را خودم انتخاب کنم.							
	5	وقتی کارهای زیادی برای انجام دادن وجود دارد اجازه دارم از بینشان آنهایی را انتخاب کنم که برایم مناسب تر است.							
	6	من اجازه دارم انتخاب کنم چه منبعی (مثلا کتاب) در کلاس کار شود.							
	7	اجازه دارم برای مطالبی که روی آن کار کرده ام مخاطب انتخاب کنم.							
لذت	1	برای رفتن به سر کلاس بسیار مشتاق هستم.							
	2	از بودن در کلاسم لذت میبرم.							
	3	استادم یادگیری را لذت بخش میکند.							
	4	آنچه را در کلاسم انجام میدهم دوست دارم.							
	5	کار کردن در یک کلاس را دوست دارم.							
	6	فعالیت هایی که در کلاسم انجام میدهم برایم لذت بخش است.							
	7	پروژه هایی را که در کلاسم روی آنها کار میکنم دوست دارم.							