

Learning styles and task preferences in online language courses: Match or mismatch?

Hamed Mohammad Hosseini ^a, Islamic Azad University, Ph.D. Candidate in TEFL, Tehran, Iran
<https://orcid.org/0000-0001-5526-4140>

Sepideh Mehraein ^{b*}, University of Tehran, Ph.D. Candidate in TEFL, Tehran, Iran. <https://orcid.org/0000-0002-9457-1757>

Suggested Citation:

Hosseini, H. M. & Mehraein, S. (2022). Learning styles and task preferences in online language courses: Match or mismatch? *Cypriot Journal of Educational Science*. 17(1), 81-94. <https://doi.org/10.18844/cjes.v17i1.6683>

Received from October 21, 2021; revised from November 14, 2021; accepted from January 25, 2022.

Selection and peer review under responsibility of Prof. Dr. Huseyin Uzunboylu, Higher Education Planning, Supervision, Accreditation and Coordination Board, Cyprus.

©2022 Birlesik Dunya Yenilik Arastirma ve Yayıncılık Merkezi. All rights reserved.

Abstract

Despite the widespread recognition of learning styles (LSs) in online language learning contexts, there seems to be a paucity of research on their direct role in learners' task preferences. Therefore, this article aims to investigate the role of LSs in learners' preferences for the specific tasks added to the typical online English learning classrooms. To accomplish this objective, data were collected through a questionnaire of LSs, task ratings and semi-structured interviews. The quantitative data revealed learners with certain dominant LSs had preferences for tasks with features consistent with their individual characteristics. The thematic data analyses went further by showing that an awareness of LSs could help learners better select their preferred tasks. It is concluded that online instructors could use tasks with specific features based on the learners' LSs and help them have an awareness of their individual characteristics in order that they can benefit more from the instructional materials.

Keywords: Learning styles, online classroom, task design, individual differences, task features

* ADDRESS FOR CORRESPONDENCE: Sepideh Mehraein, University of Tehran, Ph.D. Candidate in TEFL, Tehran, Iran
E-mail address: sepideh.mehraein@ut.ac.ir

1. Introduction

Learners attend classes with different individual characteristics such as learning styles (LSs). According to Fleming (2001), LSs refer to “an individual's characteristics and preferred ways of gathering, organising and thinking about information” (p. 1). LSs have been used in learning contexts to explain individual differences in the way learners approach learning (Kozhevnikov, 2007). Surprisingly, only a few instructors are aware of the significance of this concept and its application in learning processes in order to boost learners’ learning (Li, 2011). When it comes to online classes, such individual characteristics become more crucial to consider as in this context, learners feel more detached from their peers and instructors and are compelled to be autonomous. Moreover, identifying and reflecting on learners’ individual differences can make them aware of their strengths and weaknesses and help them to be autonomous (Coffield et al., 2004). In addition, a deeper understanding of students' LSs and how this concept affects their task satisfaction would lead to including a more effective adaptation, design and evaluation of tasks in online classes as well as improving learners’ satisfaction with online education.

1.1. Related research

1.1.1. Learning styles

Learning style is one of the learners’ individual characteristics which has a great impact on second language acquisition (SLA). During the last three decades, this concept has been scrutinised more meticulously by linguists, researchers and teachers. This is due to the fact that in a post-method era, the emphasis has shifted from teaching method as a panacea to a ‘learner-centred’ approach in the field of SLA. As a result, teachers are paying attention to some learners’ factors such as LSs, MIs, motivation, etc. Regarding LSs, a variety of definitions have been provided. Here, some of them are mentioned. Keefe (1979) defines LSs as “cognitive, affective and physiological traits that are relatively stable indications of how learners perceive interact with and respond to the learning environment” (p.4). Kinsella redefines it: “Learning styles refer to individual, natural, habitual and preferred ways of absorbing, processing and retaining new information and skills which persist regardless of teaching methods and content area” (Kinsella, 1995, cited in Reid, 1995, p.171).

There are different classifications of LSs even though some of them overlap. Reid (1995) classifies LSs into three main categories: Sensory LSs, Cognitive LSs and Affective LSs. Sensory LSs are made up of two subcategories of Perceptual and Environmental. Perceptual LSs consist of Auditory, Visual, Tactile, Kinaesthetic; while Environmental LSs include Physical and Sociological styles. Cognitive Styles are divided into Field-independent/Field-dependent, Analytical/Global, Reflective/Impulsive. Finally, affective LSs contain Myers–Briggs Temperament Styles, Tolerance of Ambiguity Styles and Right–Briggs Temperament Styles. Brown (2014) describes visual learners as those who “tend to prefer reading and studying charts, drawing and other graphic information” compared to auditory learners who “prefer listening to lectures and audiotapes” (p.113). According to Oxford (1995), visual learners tend to learn via the visual input. However, auditory learners enjoy the oral input, and they like to engage in discussions and group work. Tactile learners need to touch objects.

Another classification of LSs is the VARK Model based on Fleming (2001). The acronym VARK stands for Visual (V), Aural (A), Read/Write (R) and Kinaesthetic (K). In this model, the focus is on the diverse ways that learners take in and give out information.

- Visual learners like to use demonstrations and can learn through descriptions. They tend to be provided with charts, graphs, diagrams, pictures, brochures, flow charts and highlighters.
- Aural learners prefer to learn by listening and using a tape recorder. They appreciate lectures, discussions and aural instructions. They also like to learn things with other learners.
- Read/write learners like lists, essays, reports, textbooks, definitions, handouts, readings, manuals, Web pages and taking notes. They often draw things to remember them.
- Kinaesthetic learners prefer to learn by doing. They also enjoy hands-on experiences. Thus, they prefer not to watch or listen.

1.1.2. Learning styles and language learning

Many researchers have attempted to use the concept of LSs in learners’ language learning. Reid (1987) investigated LS preferences of ESL learners. The results demonstrated that kinaesthetic and tactile LSs were strongly preferred over audio and visual ones. Wehrwein et al. (2007) examined the relationship between gender and LSs preferences among learners. In their study, VARK questionnaire was administered to examine learners’ LSs. They found a significant relationship between the variables of gender and LSs. The findings suggested that females preferred unimodal LS, while males preferred multimodal LSs.

Griffiths (2012) believes that an awareness of LSs allows learners to maximise their potential for learning. The results of the study also showed that these individual characteristics also allow teachers to provide their learners with methodologies that are appropriate for their style preferences. In a recent study, Nikoopour and Khoshroudi (2021) investigated the effect of LSs on learners' self-regulated learning based on gender and their level of proficiency. The results showed a significant positive correlation between the LSs and self-regulated learning; however, male and female learners were found to have similar self-regulated learning strategies. Many other studies have shown significant relationships between LSs and learners’ learning (e.g., Gokalp, 2013; JilardiDamavandi et al., 2011). However, a number of other studies challenged the pivotal role of considering LSs in greater learning achievements (e.g., Gappi, 2013; Kirschner, 2017; Knoll et al., 2017; Rogowsky et al., 2020). It is worth mentioning that none of these studies called having preferred LSs into question.

1.1.3. Tasks and learning styles

Besides designing the VARK to measure four different perceptual preferences for the input, Fleming (2001) offers some tips for designing language learning activities in line with learners’ LSs in a classroom. Table 1 summarises a number of learning activities to support each LS.

Table 1. Activities that accommodate VARK learning styles

Visual	Auditory	Read/Write	Kinaesthetic
Diagrams	Debates, Arguments	Books, Texts	Real-Life Examples
Graphs	Discussions	Handouts	Examples
Colours	Conversations	Reading	Guest Lecturers
Charts	Audio Tapes	Written Feedback	Demonstrations
Written Texts	Video + Audio	Note Taking	Physical Activity
Different Fonts	Seminars	Essays	Constructing
Designs	Music	Multiple Choice	Role Play

Note. This table is adapted from Fleming (2001).

1.2. Purpose of the study

A number of studies have employed the theories of LSs in language learning contexts. Most of them have found significant relationships between LSs and learners' learning (e.g., Gokalp, 2013; JilardiDamavandi et al., 2011; Nikoopour & Khoshroudi, 2021). However, Gappi (2013) revealed no significant relationship between learners' LSs preferences and their achievements. Therefore, although many researchers have employed LSs in SLA, more evidence is needed to have a better understanding of this concept. Furthermore, only a few studies scrutinised their role in learners' task preferences (e.g., Abu-Ayyash & Assaf, 2016).

Therefore, the present study seeks to obtain empirical evidence to investigate the role of learners' LSs in their preferences for specific tasks designed and added to the online classes to make the experience of online language learning classes more favourable to all learners. To do this, a questionnaire of LSs was first used to identify learners' LSs types. In addition, seven learning tasks were designed and employed to examine the relationships between the tasks and learners' individual characteristics. For the final phase, an interview was conducted to further explain how LSs affects learners' task preferences.

The study addresses the following questions:

RQ1: Do gender and proficiency level have a significant effect on learners' LSs in online L2 classes?

RQ2: Do learners with different LSs have any preferences for tasks with certain features?

RQ3: To what extent do learners' LSs match their preferences for specific tasks?

2. Method and Materials

2.1. Research model

Since LS is a multi-dimensional construct, the current study employed a mixed methods approach by utilising quantitative and qualitative methods of data collection and analysis. According to Miles and Huberman (1994, p. 310) in mixed methods research "quantitative and qualitative inquiry can support and inform each other". This new trend uses the strength of one method (qualitative or quantitative) to overcome the weaknesses of the other.

2.2. Participants

This study consists of three phases, that is, (a) questionnaire administration, (b) task implementation and learners' task evaluation, and (c) interview with learners. Convenience sampling technique was used to choose the participants of the first phase who were 224 learners of English as a foreign language (162 females and 62 males) at BayaneBartar, a private language school in Tehran. As the tasks in the present study do not necessarily need high proficiency, participants were selected from A1 and B1 levels of proficiency based on the Common European Framework.

All participants completed a questionnaire at the beginning of the course. Towards the end of the course, of the participants who had completed the questionnaire, 106 participants volunteered for the second phase of the tasks in the study and rated the tasks using a five-point Likert scale (from 1 = very dissatisfied to 5 = completely satisfied). Finally, 20 learners were interviewed in the third phase in order to discover information about their LSs and task features and find further explanations for the two-

previously conducted phases. Every participant received an incentive of 50% discount for their next term registration. Table 2 summarises the characteristics of the participants in all the three phases.

Table 2. Demographic information of the participants for phases one and two

Characteristic		Phase 1		Phase 2		Phase 3	
		Proportion		Proportion		Proportion	
		N	%	N	%	N	%
Gender	Female	162	72	79	75	10	25
	Male	62	28	27	25	10	25
Proficiency level	A1	50	22	89	84	10	25
	B1	174	78	17	16	10	25

2.3. Data collection tools

2.3.1. Questionnaire

Learning Styles VARK: The Persian version of LSs VARK questionnaire was administered in the current study to provide a better comprehension of the items. This 16-item questionnaire is meant to identify the learners' preferred styles based on their four preferences (Visual, Aural, Read/Write and Kinaesthetic) in order to show how they learn in the best way. The reliability of the questionnaire in the current study was .76.

2.3.2. Tasks

Seven tasks, based on the activity tips in Fleming (2001), were added to the routine online classes during the term to consider different LSs. It should be noted that the term 'task' is not used as its common meaning in Task-Based Language Teaching. Rather, it is applied as a general term to refer to assignments, activities, exercises and short instructional materials. The appropriacy of the tasks was approved by three domain experienced practitioners. These tasks did not follow the same order for all the participants. Each of them is shortly elaborated as below:

- Video Speaking Assignments (VSAs): Considering that students have less interaction compared to what is the case with in-person classes, it was decided to assign a speaking practice. What makes these tasks different is that they should be recorded as video and shared on the Telegram channel designated for the class. This way other learners will also have a chance to watch the videos and give each other peer feedback. Finally, the teacher provides a written feedback for the assignments on the same channel. It is assumed that these tasks would appeal to visual and auditory learners.
- Writing Assignments (WAs): Every two sessions students are assigned a writing task whose topics are selected from the lesson themes of the week already defined for all courses. It is predicated that students with visual LS, interested in written texts and reading/writing participants, interested in written feedbacks, would benefit most from these tasks.
- Classroom Presentations (CPs): One of the problems associated with online courses is their unilateral nature with the teacher usually being the sole speaker during lessons. The purpose of adding this task to online courses was to provide the possibility for students to be chosen randomly

in order to give video presentations in every lesson. It is anticipated that learners with the auditory and kinaesthetic LSs will gain immense satisfaction with this activity.

- Classroom Discussions (CDs): In-person classes enable students to see and interact with each other. In particular, learners blessed with auditory LS can optimise their learning with this method. To simulate these group discussions in online classes, teachers make an effort to dedicate at least half an hour of the lesson to discussion of topics through voice messaging or chatting. Moreover, students are given the chance to exchange ideas about their lessons outside of class hours and on the Telegram channel designed for their class.
- Short Grammar Videos (GVs): It has been verified that providing a brief video focused on the grammatical form of the day's lesson before the class can improve students' learning (Hosseini et al., 2020). Based on this assumption, it was decided to send learners a five-minute video before the class and as a supplementary activity for online courses. This type of filliped video content is assumed to be most appealing for participants with visual LS.
- Vocabularies Text Messages (VTs): Considering the fact that many participants including visual and kinaesthetic learners may have an optimal learning experience with different media, it was decided that a list of newly learned words from the day's lesson would be sent to them as Text Messages during the day. This strategy gives them exposure to the language even outside the class and ensures vocabulary review through repetition.
- Short Quizzes (SQs): Another task added to online courses is a short quiz testing the vocabulary and grammar of the lesson, uploaded on the Telegram channel. Learners take the quiz and the answers are automatically checked with different prompts. Test takers are then informed of the results and if their answers are wrong, the reason will be explained. It is assumed that for reading/writing learners, these activities will raise the level of contentment with online courses.

2.3.3. Interview

All aspects of LS may not be effectively examined by the administration of a quantitative method such as questionnaires (Winne, 2005). This calls for utilising another method of data collection (i.e., qualitative method) to complement the findings obtained from the LSs questionnaire, and thus obtain a more detailed view of learners' awareness of their LSs. To fulfill this aim, the second researcher interviewed 20 participants (i.e., 10 males, 10 females, 10 A1 learners and 10 B1 learners) from the same population in the first two phases. The present study used individual interviews where the researcher asked questions from the interviewees on a one-to-one basis and in an interview session. Following the usual practice in applied linguistics, the interview in this study was selected semi-structured. This format is designed to have a set of questions prepared in advance. The questions were open-ended and functioned as a general guide and required the subsequent questions be improvised. Therefore, the researchers created an interview guide, consisting of 15 questions, based on the tasks of this study and the constructs of the questionnaire to explore the participants' responses more thoroughly.

2.4. Data collection process

At the beginning of the course, learners were asked to complete LS VARK questionnaire. In order to experiment with the preferred student LS, the current study used various tasks during the course. Towards the end of the course, participants' preferences for each task were rated by 106 volunteered participants based on a five-point Likert scale. After the task implementation phase, 20 participants were interviewed on the phone in their L1 in order for them to feel free to express their opinions more

eloquently. The interview sessions were audio recorded and transcribed for further identification of themes and categories.

3. Results

3.1. Phase 1

For the descriptive statistics, frequencies and percentages were calculated for LSs. Table 3 shows the frequency of each LS for 224 participants in the study. Table 3 illustrates that the most frequently observed category of LS was Auditory (n = 67).

Table 3. Frequency of different types of learning styles

<i>Learning Styles</i>	<i>N</i>	<i>%</i>
Auditory	67	30
Kinaesthetic	22	10
Reading/Writing	58	26
Visual	27	12
Double LSs	47	21
Triple LSs	3	1
Total	224	100

Two different multivariate analysis of variance tests were conducted to assess if there were significant differences in the learners' LSs between different proficiency levels and gender. To assess the assumption of multivariate normality, the squared Mahalanobis distances were calculated for the model residuals and plotted against the quantiles of a Chi-square distribution (Field, 2009). Based on the relatively straight line of the points, Multivariate normality can be assumed. To examine the assumption of homogeneity of covariance matrices, Box's M test was conducted. The results were not significant based on an alpha value of .05, $\chi^2(234) = 260.76$, $p = .111$, indicating that the covariance matrices for each group of Level and Gender were similar to one another and that the assumption was met. In addition, no outliers were detected in the model.

With regard to the differences in the preferred LSs across level and gender, the results demonstrated that the main effect for proficiency was not significant, $F(4, 218) = .58$, $p = .677$, $\eta^2_p = .01$, suggesting the linear combination of LSs was similar for each proficiency level. However, the main effect for gender was significant, $F(4, 218) = 2.45$, $p = .047$, $\eta^2_p = .04$, suggesting the linear combination of LSs was significantly different between the genders. The results are presented in Table 4.

Table 4. Multivariate tests for learning styles by level and gender

Variable	Pillai	F	Df	Residual df	<i>P</i>	η^2_p
Level	.01	.58	4	218	.677	.01
Gender	.04	2.45	4	218	.047	.04

It is evident from Table 5 that a significant univariate main effect for gender was obtained for kinaesthetic LS, $F(1, 218) = 3.862$, $p < .05$, $\eta^2 = .017$. The partial eta-squared effect size turned out to be .02 for kinaesthetic LS which is considered as a small effect (Cohen, 1988).

Table 5. Between-subjects effects for level and gender on learning styles

Source	Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta-squared
Gender	Visual	1011.423	1	1011.423	2.444	.119	.011
	Auditory	245.469	1	245.469	.748	.388	.003
	Read/Write	12.011	1	12.011	.035	.852	.000
	Kinaesthetic	1200.755	1	1200.755	3.862	.049	.017
Level	Visual	30.750	1	30.750	.074	.787	.000
	Auditory	566.922	1	566.922	1.736	.189	.008
	Read/Write	19.179	1	19.179	.056	.813	.000
	Kinaesthetic	.020	1	.020	.000	.994	.000

To further examine the effects of gender on kinaesthetic LS, the researchers intended to conduct an independent samples t-test. However, as the assumptions underlying t-test were not met, Mann-Whitney Rank-Sum Test was used. The results of this test showed that the difference between the two means was significant, $p = .041$ (see Table 6). These results suggested that gender has a statistically significant effect on the degree of learners' kinaesthetic LS. In other words, males preferred kinaesthetic LS more than females.

Table 6. Independent samples t-Test for kinaesthetic learning style by gender

Variable	Mean Rank		U	Z	p
	Male	Female			
Kinaesthetic LS	126.70	107.06	5902.50	-2.04	.041

3.2. Phase 2

For the data collected from 106 participants on phase 2, a Chi-square Test of Independence was conducted to examine whether the tasks and LSs were independent. According to the answers by the participants based on the Likert scale, the level of satisfaction was divided into three levels of Like (scores 4 and 5 on the Likert scale), Neutral (score 3 on the Likert scale) and Dislike (scores 1 and 2 on the Likert scale). To perform the test, the assumption of adequate cell size was assessed. All cells had expected values greater than zero, indicating the first condition was met. However, a total of less than 80% of the cells had expected frequencies of at least five, indicating the second condition was violated. Therefore, Fisher's exact test was used to produce more reliable results with small sample sizes. The results of the Fisher exact test were significant for VSAs ($p = .014$), WAs ($p = .006$) and CDs ($p = .038$), suggesting the relationship between these activities with the LSs. To conduct a post-hoc test, the adjusted residuals test was also conducted.

The results of the post-hoc test for VSAs shows significant values for Likes by Auditory LS, Dislikes by Reading/Writing LS and Neutrality for Visual Learners. In addition, the number of participants with Reading/Writing LS who did not like VSA tasks was significant. As for the WA tasks, the figures were significant for kinaesthetic learners who did not like the activity, and Visual as well as Auditory learners who significantly Liked the activity. In addition, for CD tasks, the Auditory learners significantly liked the activity as opposed to Visual learners who did not like the activity.

Based on the frequency of answers for each task, as shown in Table 7, Video VSAs were mostly favoured by Auditory (85.5%) and kinaesthetic (78.9%). All Visual learners liked WAs, followed by Reading/Writing learners with 94.6%. For CPs, Reading/Writing and Auditory learners were the top likers with 89.2% and 81.8% respectively. For CDs, Auditory (89.1%) and Reading/Writing (81.1%)

learners were on the top of the list of likers. GVs had the highest rate of satisfaction among learners (86.3%), with Visual learners (95%) and Reading/Writing learners (86.5%) voting for that. As for the VTs, 85% of Likes was from Visual learners, followed by 84.2% of Likes from kinaesthetic learners. Finally, 89.2% of Reading/Writing learners and 75% of Visual learners voted for SQ activities.

Table 7. The results of the Fisher's Exact test for the relationship between tasks and learning styles

Learning Styles	VSAs			<i>p</i>
	Like	Dislike	Neutral	
Kinaesthetic	15[14.50](.3)	3[2.61](.3)	1[1.89](-.7)	.014
Auditory	47[41.98](2.1)*	5[7.56](-.13)	3[5.46](-.15)	
Visual	15[15.27](-.2)	0[2.75](-.19)	5[1.98](2.4)*	
Reading/Writing	23[28.24](-.2.4)*	10[5.08](2.8)*	4[3.67](.2)	
WAs				
Kinaesthetic	12[16.10](-.2.8)*	2[.44](2.6)*	5[2.47](1.9)	.006
Auditory	44[46.60](-.1.3)	1[1.26](-.3)	10[7.14](1.5)	
Visual	20[16.95](2.1)*	0[.46](-.7)	0[2.60](-.1.9)	
Reading/Writing	35[31.35](2.0)*	0[.85](-.1.1)	2[4.80](-.1.6)	
CPs				
Kinaesthetic	15[15.52](-.3)	1[.73](.4)	3[2.76](.2)	.490
Auditory	45[44.92](.0)	3[2.10](.8)	7[7.98](-.5)	
Visual	14[16.34](-.1.5)	1[.76](.3)	5[2.90](1.4)	
Reading/Writing	33[30.22](1.4)	0[1.41](-.1.4)	4[5.37](-.8)	
GVs				
Kinaesthetic	15[16.39](-.3)	1[.58](.6)	3[2.03](.7)	.714
Auditory	47[47.44](-.1)	1[1.68](-.5)	7[5.88](.5)	
Visual	19[17.25](.4)	0[.61](-.8)	1[2.14](-.8)	
Reading/Writing	32[31.92](.0)	2[1.13](.8)	3[3.95](-.5)	
VTs				
Kinaesthetic	16[15.08](.2)	1[1.02](.0)	2[2.90](-.5)	.821
Auditory	40[43.66](-.6)	3[2.94](.0)	12[8.40](1.2)	
Visual	17[15.88](.3)	1[1.07](-.1)	2[3.05](-.6)	
Reading/Writing	31[29.37](.3)	2[1.98](.0)	4[5.65](-.7)	
SQs				
Kinaesthetic	13[14.36](-.4)	3[3.19](1.3)	3[1.45](-.1)	.237
Auditory	38[41.56](-.6)	13[9.24](-.1)	4[4.20](1.2)	
Visual	15[15.11](.0)	3[3.36](.4)	2[1.53](-.2)	
Reading/Writing	33[27.96](.0)	3[6.21](-.1.1)	1[2.82](-.1.3)	
CDs				
Kinaesthetic	14[15.37](-.9)	2[1.16](.9)	3[2.47](.4)	.038
Auditory	49[44.50](2.0)*	3[3.36](-.3)	3[7.14](-.2.2)*	
Visual	13[16.18](-.2.0)*	3[1.22](2.0)*	4[2.60](1.0)	
Reading/Writing	30[29.94](.0)	0[2.26](-.1.8)	7[4.80](1.3)	

Note. Values formatted as Observed [Expected] (Standardised Residual).

3.3. Phase 3

In order to answer the research question in this phase, a semi-structured interview was conducted. As already pointed out, 20 learners with different LSs were interviewed to verify and complement the findings from quantitative data in phases one and two. In addition, since this study was an attempt to examine the role of tasks in relation to LSs, the researchers decided to add some questions pertaining to the learners' preferences and levels of satisfaction regarding tasks used in this study.

The interview analysis demonstrated that 14 interviewees out of 20 were aware of either their exact LSs or at least one of their LSs preferences (in case of multiple LSs). It should be noted that learners' task preferences who were more conscious about their dominant individual characteristics preferred the tasks in line with those characteristics. As mentioned earlier, learners' preferences for tasks and their learning were examined using an interview based on LSs. Therefore, this variable was considered and analysed, and the analysis showed two different patterns of behaviours.

- Group 1: Learners' LSs Match their Task Preferences

Here, the answers of the learners who showed a match between their LSs and task preferences are reviewed. In fact, these participants revealed two important points: (1) they had a clear idea of their LSs and (2) they preferred the tasks that had some features related to their LSs. For instance, one of the interviewees who had an auditory LS preference stated:

Excerpts 1

I prefer learning in auditory and visual ways, and I do my best to do so by watching movies. ... it really helps me because I can memorise (prefabricated) sentences ... I also enjoy learning in a group or a community as there are a lot of communication and cooperation in groups.

I totally like Video Speaking Assignments because it hinders my stress to talk, and I can learn a lot from those activities. Moreover, they include both video and sound which I love to use.

Interestingly, many learners who had multiple LSs were aware of the fact that they could learn in different ways although they sometimes did not refer to all of their individual characteristics. The excerpt of one of the participants who had auditory/ kinaesthetic LSs is given here:

Excerpt 2

I normally like to learn by doing and experiencing ... Also, when I learn something in this way, I hardly forget it because it is really exciting. When there is a variety of activities in class, I am more motivated to learn.

I really like Class Dialogues and Video Speaking Assignments because I guess they relieve my stress and boost my self-confidence. When I have one of those activities, I present the materials to my family and friends before the actual presentation ... to modify the structure of the sentences and words.

- Group 2: Learners' LSs Do Not Match their Task Preferences

These learners showed some mismatches between what their LSs preferences were and what they preferred to do in class. In addition, they were even not sure about the way they learn things, and in some cases, there were some inconsistencies about the results of learners' LSs in the quantitative phase and their interview answers regarding their individual characteristics. As an example, one of the interviewees was shown to have a read/write LS based on the VARK questionnaire but claimed to learn

things in visual and aural style. Moreover, her preferred tasks did not match the LSs she claimed to have. According to her,

Excerpt 3

I believe in the influence of pictures, videos and sounds. When I used to go to high school, I started to watch English movies and listen to music... I also talked to my uncle's friends in the USA. Little by little, I became really motivated to learn English, so I guess this is the perfect way for me to learn. Among the tasks in our classes, I like the Writing Assignments and also the Classroom Presentations because I can improve my weak grammar and choice of words.

The interview analysis of the second group also showed that most of the learners in this group had a lower proficiency level (i.e., A1). This can be due to the fact that as they did not experience learning English continuously, they were unaware of their exact way(s) of learning. These learners stated that they need to seek help from others; therefore, they preferred the tasks which provided feedback or were under the supervision of the instructors (e.g., Writing Assignments). Such learners asked others to tackle their problems or to improve their proficiency. It can be said that as they do not exactly know their LSs in order to learn more effectively, they need others to provide them with their best way(s) to learn.

Excerpt 4

When I face a problem, I ask for help from my teacher or a friend who is more knowledgeable and I'm more comfortable with. This semester, I have a patient teacher who gives me feedback on my language progress. As I like receiving feedback, I prefer the Writing Assignments followed by a perfect feedback.

Based on the interview analysis, it seems evident that these two groups had different ideas about their individual differences. Figure 1 shows a summary of the typical features of the two groups.

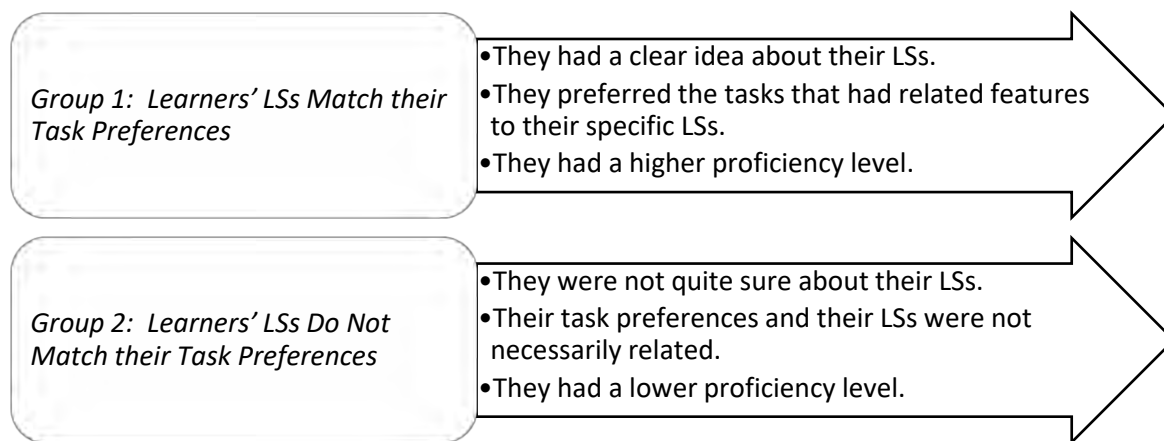


Figure 1. Summary of the interview analysis

4. Discussion

This study investigated the potential role of learners' LSs in their preferences for the tasks added to the online L2 learning classrooms. First, it was noticed that the dominant LS was auditory, with roughly a third of the participants studied. The results run counter to the studies that indicated the kinaesthetic and/or visual LSs as the dominant LS (e.g., Abu-Ayyash & Assaf, 2016; Reid, 1987). Regarding the

relationship between LSs and two independent variables of gender and proficiency level, the results showed no significant differences among different LSs for the groups with different proficiency levels of A1 and B1, suggesting that the preferences for LSs do not change based on the proficiency level. However, for gender, the difference between male and female participants was significant for kinaesthetic LS, with men showing more tendency to this LS. The findings are in line with those of Wehrwein et al. (2007) who found a significant correlation between gender and LSs preferences.

On the relationship between learners' LSs and their preferences for the tasks with certain features, the findings showed significant preferences for VSA tasks, which was mostly favoured by auditory learners and least favoured among reading/writing learners, WA tasks, which was mostly appealing to learners with reading/writing and visual learning styles, and the least among kinaesthetic learners, and CD tasks, which were interesting most for the auditory learners and least for the visual ones.

Although not significant, there were preferences among learners with different dominant LSs for the other tasks as well. CPs and SQs tasks were mostly liked by reading/writing learners; GV tasks were mostly attractive for visual learners and VTs were liked highest by visual learners. These findings are in congruence with Fleming (2001) who classified various activities based on learners' LSs.

Furthermore, as the results of the semi-structured interview revealed, when learners were aware of their LSs, they reacted better to tasks. In other words, learners who had a clear idea of their LSs and preferred the tasks with some features related to their LSs. However, this is not the case for the learners with no awareness of their LSs. The results of the interview find support from the findings of Griffiths (2012) who demonstrated that an awareness of LSs allows learners to maximise their potential for learning. Another interesting finding of the interview was that the learners who were not aware of their LSs were mostly in lower levels of proficiency, suggesting that learners might learn more about their LSs and MIs as they proceed with their trajectory of learning.

5. Conclusion

Overall, the findings of this study revealed the effective role of learners' LSs in their task preferences in online L2 classroom contexts. Moreover, the present study highlights the role of being aware of learners' LSs in designing tasks and instructional materials. These tasks and materials with certain features can accommodate the desires of learners with different individual characteristics. Additionally, this study suggests that learners with different LSs have specific preferences for tasks with certain features similar to their dominant LS(s). Learners' awareness of their LSs can also help them to choose tasks consistent with their individual characteristics and to find their preferred way to learn more effectively. Finally, the current study enriches our understanding regarding the differences between males' and females' LSs. Therefore, language instructors may tend to focus on the learners' individual characteristics and the effects tasks can have on their process of learning in order that more learners can benefit from the instructional materials.

The present study opens several avenues for future research. First and foremost, more research is needed to investigate the relationship between learners' LSs and their task preferences. Second, the study showed no significant effect of proficiency level on learners' LSs. This may be due to the fact that only two proficiency levels were included here. It is recommended that further studies be carried out recruiting students with different levels of proficiency. Next, as the tasks in this study were administered

only in online learning classrooms, future research can be conducted in other learning contexts in order to investigate the differences between the learning contexts.

References

- Abu-Ayyash, E. A., & Assaf, M. (2016). The impact of learning-style and task-based teaching of language on learners' achievement. *Journal of Education in Black Sea Region*, 2(1), 29-54. <https://doi.org/10.31578/jebs.v2i1.36>
- Brown, D. (2014). *Principles of language learning and teaching (6th ed.)*. Pearson Education.
- Coffield, F., Moseley, D., & Hall, E., Ecclestone, K. (2004). Learning styles and pedagogy in post-16 learning: A systematic and critical review. Learning and Skills Research Centre.
- Field, A. (2009). *Discovering statistics using SPSS (3rd ed.)*. Sage.
- Fleming, N. (2001). *Teaching and learning styles. VARK strategies*. Christchurch, New Zealand.
- Gappi, L. L. (2013). Relationships between learning style preferences and academic performance of students. *International Journal of Educational Research and Technology*, 4(2), 70-76.
- Gokalp, M. (2013). The effect of students learning styles to their academic success. *Educational Research and Reviews*, 8(17), 1634-1641. <https://doi.org/10.5897/ERR2013.1575>
- Griffiths, C. (2012). Learning styles: Traversing the quagmire. In S. Mercer, R. Ryan & M. Williams (Eds.), *Psychology for language learning: insights from research, theory and Practice* (pp. 151-168). Palgrave Macmillan. https://doi.org/10.1057/9781137032829_11
- Hosseini, H. M., Ejtehad, A., & Hosseini, M. M. (2020). Flipping microlearning-based EFL classroom to enhance learners' self-regulation. *Language Teaching Research Quarterly*, 20, 43-59. <https://doi.org/10.32038/ltrq.2020.20.03>
- Keefe, J. W., & Kiernan, O. B. (1979). *Student learning styles: diagnosing and prescribing programs*. National Assn of Secondary School.
- Kinsella, K. (1995) Understanding and empowering diverse learners in ESL classrooms. In J. M. Reid, *Learning styles in the ESL/EFL classroom* (pp. 170-94). Heinle & Heinle.
- Kirschner, P. A. (2017). Stop propagating the learning styles myth. *Computers & Education*, 106, 166-171. <https://doi.org/10.1016/j.compedu.2016.12.006>
- Knoll, A. R., Otani, H., Skeel, R. L., & Van Horn, K. R. (2017). Learning style, judgements of learning, and learning of verbal and visual information. *British Journal of Psychology*, 108(3), 544-563. <https://doi.org/10.1111/bjop.12214>
- Kozhevnikov, M. (2007). Cognitive styles in the context of modern psychology: Toward an integrated framework of cognitive style. *Psychological Bulletin*, 133, 464-481. <https://doi.org/10.1037/0033-2909.133.3.464>
- JilardiDamavandi, A., Mahyuddin, R., Elias, H., Daud, S. M., & Shabani, J. (2011). Academic achievement of students with different learning styles. *International Journal of Psychological Studies*, 3(2), 186-192. <https://doi.org/10.5539/ijps.v3n2p186>
- Li, J. (2011). The literature review about the research on learning style both abroad and at home. *Theory & Practice in Language Studies*, 1(12), 1780-1785. <https://doi.org/10.4304/tpls.1.12.1780-1785>
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook*. Sage.
- Nikoopour, J., & Khoshroudi, M. S. (2021). EFL learners' learning styles and self-regulated learning: Do gender and proficiency level matter? *Journal of Language Teaching and Research*, 12(4), 616-623. <https://doi.org/10.17507/jltr.1204.13>

- Hosseini, H. M. & Mehraein, S. (2022). Learning styles and task preferences in online language courses: Match or mismatch? *Cypriot Journal of Educational Science*. 17(1), 81-94. <https://doi.org/10.18844/cjes.v17i1.6683>
- Oxford, R. L. (1995). Gender differences in language learning styles: What do they mean? In J. M. Reid, *Learning styles in the ESL/EFL classroom* (pp. 34-46). Heinle & Heinle.
- Reid, J. M. (1987). The learning style preferences of ESL students. *TESOL Quarterly* 21(1), 87-111. <https://doi.org/10.2307/3586356>
- Reid, J. M. (1995). *Learning styles in the ESL/EFL classroom*. Heinle & Heinle.
- Rogowsky, B. A., Calhoun, B. M., & Tallal, P. (2020). Providing instruction based on students' learning style preferences does not improve learning. *Frontiers in Psychology*, 11, 164. <https://doi.org/10.3389/fpsyg.2020.00164>
- Wehrwein, E. A., Lujan, H. L., & DiCarlo, S. E. (2007). Gender differences in learning style preferences among undergraduate physiology students. *Advances in Physiology Education*, 31, 153-157. <https://doi.org/10.1152/advan.00060.2006>
- Winne, P. H. (2005). A perspective on state-of-the-art research on self-regulated learning. *Instructional Science*, 33, 559-565. <https://doi.org/10.1007/s11251-005-1280-9>