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Role of Learning Environment in Arabic as a Foreign Language in Saudi Arabia

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***Abstract*—The second-language learning environment (L2LE) plays an important role in successful second language (L2) learning achievement. Studies in English as a foreign language (EFL) found that when learners feel anxiety or negative emotions in the L2LE, it reduces their willingness to communicate (WTC), and this could impede their L2 achievement. Although it is likely that the L2LE has a similar impact on Arabic as a foreign language (AFL), there is a lack of research that focuses on the role of the Arabic L2LE. The Kingdom of Saudi Arabia (KSA) has organized Arabic Learning Institutes (ALIs) that teach AFL to foreign students on government scholarship studying in KSA's higher education institutions. The aim of this study was to develop, pilot, and evaluate the validity and reliability of an instrument to measure the influence of the Arabic L2LE in AFL learners at KSA's ALIs. Using items and domains from existing instruments, a 32-item instrument was piloted among 140 ALI learners, with the data from 70 retained for analysis. Factor, reliability and correlation reduced items to 17 and revealed evidence of three independent subscales: classroom, teacher/curriculum, and personal anxiety toward L2 Arabic. Although ALI learners appeared motivated by classroom, teacher, and curriculum, their L2 achievement seemed impeded by anxiety, likely due to de-emphasis in classroom interaction in Arabic. Future research should be undertaken to improve the validity and reliability of the Arabic L2LE instrument, and to further investigate strategies to reduce anxiety and increase WTC in ALI learners.**

***Index Terms*—Arabic, second-language learning environment, heritage and minority languages, Muslim, survey methods**

I. Introduction

Researchers studying factors that influence second-language acquisition (SLA) have identified that the second-language learning environment (L2LE) plays an important role in successful SLA. Among learners of English as a foreign language (EFL), research shows that more exposure to spoken English in the learning environment increases SLA (Dewaele, 2019; Zoubi, 2018), and that EFL teachers serve as language "role models" (Muir et al., 2021). In contrast, if learners feel anxiety or negative emotions in the learning environment, their SLA is hindered (Dewaele, 2019; Khajavy et al., 2018; Oteir & Al-Otaibi, 2019). This is likely because feeling anxiety in the L2LE has been found to decrease learners' willingness to communicate (WTC), thus impeding their learning (Dewaele, 2019; Khajavy et al., 2018).

Factors in the L2LE that influence SLA among second-language (L2) Arabic learners have received less attention among L2 learning researchers. As with EFL, different aspects of the teacher, curriculum, and classroom environment influence L2 Arabic learning (Dubiner, 2019). In their study of L2 Arabic learners who were undergraduates at a United States (US) university, Brosh (2019) found that advanced learners preferred interaction with the teacher and working individually, while those at the beginner level preferred group work. A similar finding was obtained from a study of strategies used by EFL compared to Arabic as a foreign language (AFL) students, where AFL students used different strategies at different levels, while the EFL students favored metacognitive, compensation and social strategies at all levels (Fithriyah et al., 2019).

Unlike with learning L2 English, learning Arabic as an L2 has a unique connection with identity, in that Arabic is the liturgical language (LL) of Islam (Husseianali, 2005; Husseinali, 2006). A study of students learning L2 Arabic in higher education in the Islamic country of Indonesia found that religion influenced their L2LE, in that those identifying as Muslim felt uncomfortable studying Arabic in classes with non-Muslims (Ritonga et al., 2020). This is because Arabic is both a heritage language (HL) among those who grow up in an Arabic-speaking country, and a LL for Muslims, as their holy book Quran is written in Arabic (Husseinali, 2006; Jaspal & Coyle, 2010). A different study of L2 Arabic learners at Arabic language institutes (ALIs) in the Kingdom of Saudi Arabia (KSA) found that one of the main reasons learners were motivated to study Arabic was due to their Islamic identity (Shaalan et al., IN PRESS).

The current research focuses on factors influencing SLA of Arabic at ALIs in KSA. These ALIs were set up by the KSA Ministry of Education (MoE). These MoE ALIs include the Arabic Language Teaching Institute at Imam Mohammed Ibn Saud Islamic University (Imam-ALI) (Abdelhalim & Alqubayshi, 2020), the Arabic Teaching Institute

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for Non-Arabic Speakers at Princess Nourah bint Abdulrahman University (PNU-ALI), and the King Abdulaziz University Arabic Language Institute (KAU-ALI) (Shaalan et al., 2023). All are situated in KSA's capital city Riyadh, and while Imam-ALI only serves male learners, both KAU-ALI and PNU-ALI accommodate only female students. The signature program at all three ALIs is called the Diploma Program, which provides L2 Arabic instruction over two years to non-Arabic speakers who are studying at KSA higher education institutions on government scholarship. Almost all of these students are Muslim, which eliminates the issue of AFL learners of mixed religions in the same L2LE (Abdelhalim & Alqubayshi, 2020; Ritonga et al., 2020; Shaalan et al., 2023).

The objective of the ALI Diploma Programs is to develop L2 Arabic competency in learners to a high enough degree to facilitate their participation in higher education programs delivered in Arabic elsewhere in the KSA university system. The ALI Diploma Programs use a standardized national L2 Arabic curriculum established by the MoE. This curriculum emphasizes basic reading and writing in the first year. As the program progresses and throughout the second year, there is a deeper examination of the history and meanings in the Arabic language. Contrary to many EFL programs (Seraj & Hadina, 2021), conversational Arabic and improving Arabic L2 speech and spontaneous dialogue in learners through practice is not emphasized in the ALI Diploma Program curriculum.

The current analysis was undertaken to better understand factors associated with the L2LE that influence Arabic language learning in the Diploma Programs at KSA's ALIs. The intention was to develop an instrument that characterizes the impact of the Arabic L2LE on the AFL learner's L2 motivation. The aim of this research was to develop, pilot, and assess the validity and reliability of an instrument to measure the influence of the Arabic L2LE and learner attitudes toward the L2 and L2LE in a sample of L2 Arabic learners at KSA's ALIs.

II. Materials and Methods

This analysis is part of a larger cross-sectional study undertaken to better understand influences on L2 Arabic learning among students at KSA's ALIs (Shaalan et al., 2023). The focus is to research the influence of identity, the L2LE, and integrativeness as defined by Gardner and colleagues (2000) on L2 Arabic learning. A previously published article describes how an existing instrument to measure identity-motivation to study L2 Arabic was adapted for use in this study, and demonstrated evidence of both reliability and validity (Shaalan et al., 2023). As described in the article, the primary L2 motivations arising from identity were due to the learner's Islamic faith (ISLAM), for cultural exposure (CE), for instrumental purposes (INS), and to better understand problems and politics in the Arab world (PP) (Shaalan et al., 2023). As part of the same study, an instrument to measure the influence of the Arabic L2LE on ALI Diploma Program learners was developed and tested, and the results are reported here.

A. Arabic Second-Language Learning Environment (L2LE) Instrument Development

The literature was reviewed to identify items that could be used to measure the influence of the L2LE on motivation to learn L2 Arabic at KSA's ALIs. Empirically, it was felt that the items should adequately cover these four domains: attitudes toward learning L2 Arabic (Aladdin, 2010; Al-Musnad, 2018; Asker, 2012; Gardner, 2000; Masgoret & Gardner, 2003), influence of the L2 Arabic classroom environment (Assulaimani, 2015; Moskovsky et al., 2016; Subekti, 2018), influence of the L2 Arabic curriculum (Asker, 2012), and influence of L2 Arabic teachers (Asker, 2012).

Items were adapted for each domain from several published studies of L2 learning of Arabic or English (see Table 2 for item wording), and the scale from the identity-motivation instrument was used, where the respondent was asked to rate each item in terms of level of agreement using a one to seven scale (Asker, 2012; Assulaimani, 2015). Thirty-two items were included in the pilot instrument, with 12 adapted from Assulaimani (2015), nine from Asker (2012), four from Aladdin (2010), four from Subekti (2018), one from Moskovsky and colleagues (2016), and two developed by the author as reverse-coded items to balance out domains (as detailed in Table 2). The intent was to use factor analysis to reduce the number of items in the pilot instrument and clarify the domains as factors.

B. Participants, Setting and Data Collection

An anonymous survey asking for demographic information and items from all instruments included in the study was programmed into online survey application SurveyMonkey. As described in the previous publication (Shaalan et al., 2023), a link was provided to learners at Imam-ALI, KAU-ALI, and PNU-ALI who either were alumni of the diploma program (PNU-ALI n = 98) or were currently enrolled in the diploma program (KAU-ALI n = 43, Imam-ALI n = 105). Using a group chat created by instructors at KAU-ALI and Imam-ALI in the social media application WhatsApp that included current Diploma students, the survey was administered at those locations (Shaalan et al., 2023). As the Dean of PNU-ALI maintains a WhatsApp group of Diploma alumni, she used this to administer the survey (Shaalan et al., 2023). The survey was administered through an anonymous survey link provided to members of these WhatsApp groups (Shaalan et al., 2023). Students receiving the link were asked to complete the survey either during or after class by week's end. Alumni receiving the link were asked to complete the survey over the next week (Shaalan et al., 2023).

C. Data Analysis

R statistical software was used for data analysis (R Core Team, 2021). First, descriptive analysis was used on demographic variables. Next, factor analysis was undertaken to evaluate validity of the L2LE instrument. To compare the alignment of factor loadings to how they had been assigned to pre-specified domains originally, I used the *principal*

command from the *psych* package with the varimax rotation. The *alpha* command from the *psych* package was used to calculate Cronbach α scores for each group of items loading on an identified factor. Consistent with the literature, an α of 0.70 and above was established as being considered acceptable (Dörnyei, 2007). I used the *likert* package to visualize the distribution of raw answers to Likert items (Bryer & Speerschneider, 2016).

To establish number of factors during factor analysis, three-factor, four-factor, and five-factor models were attempted, and the one that was selected was felt to fit the data best. The package *nfactors* was used to run a scree plot also aid in the selection of the optimal model (Raiche & Magis, 2020). After reviewing the results, decisions were made as to which items to keep in the final version of the Arabic L2LE instrument, and to which subscales to assign them (available in Appendix A). Once items were selected and placed on subscales, summary scores were calculated by adding together the values of the items on each subscale. To compare mean scores on each subscale across the three participating ALIs, an analysis of variance (ANOVA) was conducted. Finally, in consideration of convergent and discriminant validity, Pearson correlation analysis was used to evaluate the correlation between subscales on both the identity-motivation instrument and the L2LE instrument. For statistical testing, α set at 0.05.

III. Results

As reported in a previous paper (Shaalan et al., 2023), survey links were sent out to 246 learners at KAU-ALI, PNU-ALI, and Imam-ALI, and from this effort, 140 anonymous surveys were received, for an overall response rate of 57%. Due to missing data, 70 of these were removed, and this left 70 surveys available for analysis (see Table 1).

A. Demographics

Table 1 provides demographics from respondents for the 70 surveys included in the analysis (Shaalan et al., 2023). As shown in Table 1, these included nine from KAU-ALI (n = 13%) and 39 from PNU-ALI (56%), which were all from female respondents, and 22 from Imam-ALI (31%), which all were from male respondents.

Table 1
Demographics

			Site[d]		
Category	Level	All n, %	KAU-ALI n, %	PNU-ALI n, %	Imam-ALI n, %
All	All	70, 100%	9, 13%	39, 56%	22, 31%
Gender	Male	22, 31%	0, 0%	0, 0%	22, 100%
	Female	48, 69%	9, 100%	39, 100%	0, 0%
Age group (years)	18-24	32, 46%	3, 33%	15, 38%	14, 64%
	25-34	35, 50%	6, 67%	22, 56%	7, 32%
	35-64	3, 4%	0, 0%	2, 5%	1, 5%
Marital status[b]	Married	32, 46%	6, 67%	20, 51%	6, 27%
	Never married	38, 54%	3, 33%	19, 49%	16, 73%
Ethnic/religious[a]	Identify as Arab	8, 11%	0, 0%	4, 10%	4, 18%
	Identify as Muslim	68, 97%	8, 89%	38, 97%	22, 100%
	Identify as Middle Eastern	6, 9%	2, 22%	4, 10%	0, 0%
Language fluency	Any African language	27, 39%	6, 67%	7, 18%	14, 64%
	Any Chinese language	2, 3%	0, 0%	2, 5%	0, 0%
	Any Indian language	16, 23%	0, 0%	13, 33%	3, 14%
	Arabic	45, 64%	3, 33%	26, 67%	0, 0%
	English	51, 73%	4, 44%	29, 74%	18, 82%
	French	6, 9%	1, 11%	1, 3%	4, 18%
	German	3, 4%	0, 0%	2, 5%	1, 5%
	Spanish	1, 1%	0, 0%	0, 0%	1, 5%
	Fluency in any of above languages	62, 89%	7, 78%	36, 92%	19, 86%
Parents speak Arabic?	One speaks fluent Arabic	24, 34%	1, 11%	18, 46%	5, 23%
	Both speak fluent Arabic	3, 4%	0, 0%	2, 5%	1, 5%
Intensity of Arabic study	Enrolled in formal Arabic language learning program	42, 60%	9, 100%	16, 41%	17, 77%
Completed instruments[c]	Identity Motivation	69, 99%	9, 100%	39, 100%	21, 95%

[a]None of the respondents in the study identified as Saudi. [b]None of the respondents in the sample identified as divorced or widowed. [c]The sample was limited to respondents who completed all items of the second-language learning environment instrument. [d]KAU-ALI: King Abdulaziz University Arabic Language Institute, PNU-ALI: Arabic Teaching Institute for Non-Arabic Speakers at Princess Nourah bint Abdulrahman University, Imam-ALI: Al-Imam Muhammad Ibn Saud Islamic University.

In terms of age group, respondents were relatively young, in that about half (50%) were aged 25-34 years. Also, over half (59%) reported being unmarried. Although respondents were diverse in terms of ethnicity, none reported being Saudi. However, 13% reported being Arab, and 11% identified as Middle Eastern. Almost all respondents (97%) identified as Muslim. The most common language of fluency other than Arabic was English (74%), with Arabic at 62%. After this, 40% of respondents reported fluency in any African language, 21% reported fluency in any Indian language, and 13% reported being fluent in French. When asked about parental Arabic fluency, only 5% reported that both parents

were fluent, while approximately one third (32%) reported having only one parent who spoke fluently. When asked if they were currently enrolled in a formal Arabic language learning program, 63% chose “yes”.

B. Factor Analysis Results

Factor analysis results for the Arabic L2LE instrument are presented in Table 2. As can be seen in Table 2, a four-factor model was selected.

TABLE 2
FACTOR ANALYSIS RESULTS ARABIC SECOND-LANGUAGE LEARNING ENVIRONMENT INSTRUMENT

		Four-factor Model			
Item Wording	Code*	RC1	RC3	RC2	RC4
My teachers are patient with students whose Arabic is difficult to understand.[d,g]	Classroom1	**0.70**	0.14	-0.10	-0.12
Most of my Arabic teachers take a personal interest in students.[d,g]	Did not load	-0.13	0.26	0.21	0.65
Arabic students are often asked by the teacher to choose how they want to learn.[d,g]	Did not load	-0.08	0.47	0.08	0.11
My Arabic teachers have interesting teaching styles.[d,h]	TeachCurric1	0.37	**0.62**	-0.14	0.07
I like my Arabic teacher because their class is fun.[d,j]	TeachCurric2	0.47	**0.66**	-0.12	-0.03
Most of my Arabic teachers can get angry easily.[d,e,g]	Did not load	-0.48	-0.37	0.27	0.44
My Arabic teacher doesn't teach in an interesting way.[d,e,h]	Did not load	-0.55	-0.61	0.19	0.05
I find the other students at my Arabic classes really friendly.[b,h]	Classroom2	**0.73**	0.48	-0.09	0.06
I always look forward to Arabic classes.[b,j]	Classroom3	**0.74**	0.27	0.08	0.20
It worries me that other students in my class seem to speak Arabic better than I do.[b,e,h]	PersAnx1	0.16	0.11	**0.66**	0.08
I'm losing any desire I ever had to know Arabic.[b,e,h]	Did not load	-0.63	-0.06	0.32	-0.02
I enjoy the activities of our Arabic class much more than those of my other classes.[b,i]	TeachCurric3	0.23	**0.71**	-0.35	0.14
I have no interest in my Arabic class.[b,e,h]	Did not load	**-0.79**	-0.13	0.14	-0.26
I really enjoy learning Arabic.[b,h]	Classroom4	**0.72**	0.44	-0.02	0.26
I like the overall atmosphere of my Arabic classes.[b,h]	Did not load	0.47	0.54	-0.08	0.33
I am sometimes worried that the other students in class will laugh at me when I speak Arabic.[b,e,h]	PersAnx2	-0.09	-0.04	**0.66**	-0.26
I think my Arabic class is boring.[b,e,h]	Did not load	**-0.74**	-0.51	0.13	-0.06
The materials in my Arabic class suit my needs.[c,j]	Did not load	0.63	0.47	0.04	0.16
I find the Arabic books that we are studying in class useful.[c,h]	TeachCurric4	0.59	**0.60**	0.01	-0.08
The Arabic books that we use in class are really boring.[c,e,h]	Did not load	-0.64	-0.28	0.24	-0.05
Some of my Arabic course materials are too difficult for me.[c,e,g]	Did not load	-0.13	-0.43	0.55	0.06
The level of difficulty of my Arabic course materials helps me improve my Arabic.[c,j]	TeachCurric5	0.40	**0.57**	0.25	0.01
Sometimes I feel I can hardly cope with the materials in this Arabic course.[c,e,g]	Did not load	0.09	-0.37	0.46	0.14
Sometimes I do not understand what I read or listen to in Arabic class.[c,e,g]	PersAnx3	-0.35	0.14	**0.58**	0.09
I think I expend a lot of effort in learning Arabic.[a,g]	Did not load	0.56	-0.01	0.07	-0.20
Arabic is one of the most important languages in the world.[a,f]	Classroom5	**0.71**	-0.02	0.05	0.38
Arabic is not an important global language to learn.[a,e,k]	Did not load	-0.29	0.16	0.25	-0.58
Everybody regardless of their ethnicity and faith should learn Arabic.[a,f]	Did not load	0.17	0.43	0.01	0.10
Learning Arabic is an advantage for me.[a,f]	Classroom6	**0.83**	0.20	0.04	0.29
I can honestly say that I am really doing my best to learn Arabic.[a,g]	Classroom7	**0.71**	0.25	0.00	0.08
The Arabic language is difficult to learn.[a,e,f]	Did not load	-0.07	-0.21	0.45	-0.44
Just because a person has a certain ethnicity or faith should not require them to learn Arabic.[a,e,k]	Did not load	-0.24	-0.16	0.00	-0.55

*This code is used to indicate which subscale the item was placed on for scoring based on factor analysis results. Bolded value indicates how item was selected for factor. The four-factor model rendered factors RC1-RC4. RC1 was labeled "classroom environment", and consists of items Classroom1-7. RC3 was labeled "teacher/curriculum, and consists of items TeachCurric1-5. RC2 was labeled "personal anxiety toward Arabic learning environment", and consists of items PersAnx1-3. RC4 was not considered a subscale. aOriginally placed on the "attitudes toward learning second-language Arabic" domain. bOriginally placed on "second-language Arabic classroom environment" domain. cOriginally placed on "second-language Arabic curriculum" domain. dOriginally placed on the "second-language Arabic teacher" domain. eReverse-coded. fAdapted from Aladdin (2010). gAdapted from Asker (2012). hAdapted from Assulaimani (2015). iAdapted from Moskovsky et al. (2016). jAdapted from Subekti (2018). kCreated by authors to add reverse-coded items to counterbalance positively-coded items included.

As can be seen in Table 2, a four-factor model was accepted, but only the first three factor loadings were felt to be strong enough to place items on subscales. This choice appears to be supported by the scree plot, which implies some ambiguity between a third and fourth factor (see Figure 1).

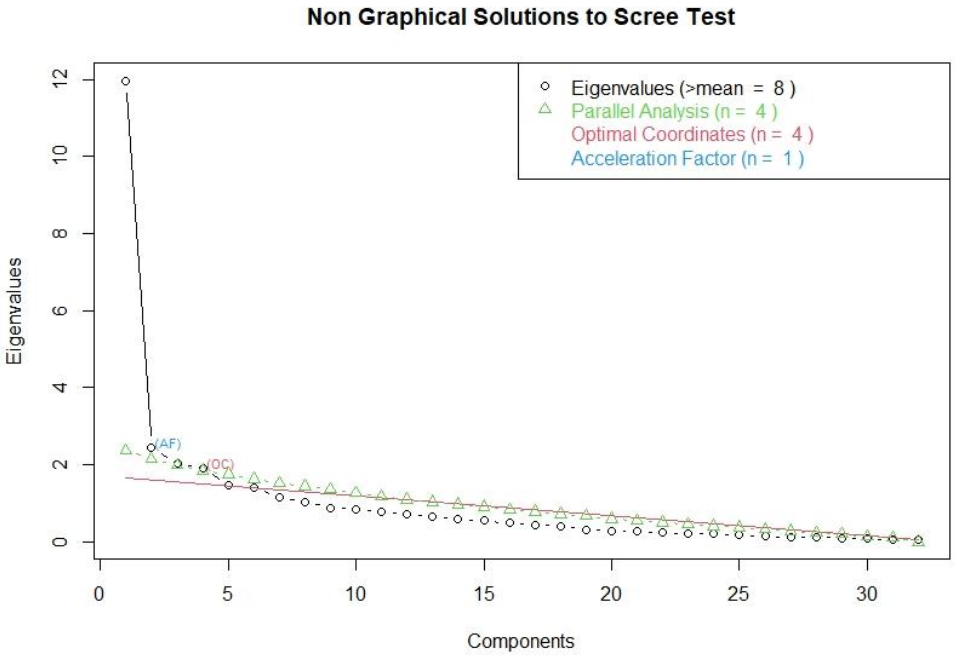

Figure 1. Scree Plot for Arabic Second-Language Learning Environment Instrument
Factor analysis results and this scree plot were interpreted to imply a four-factor model, although only the first three factors were felt to be robust enough to interpret

As shown in Table 2, of the 32 items included in the pilot instrument, only 17 loaded on the first three factors. These 17 were placed on three subscales according to the factors onto which they loaded. The first factor was labeled "L2 classroom environment", contained seven items, and these items were assigned the codes Classroom1 through Classroom7. The second factor was labeled "L2 teacher/L2 curriculum", contained five items, and these items were assigned the codes TeachCurric1 through TeachCurric5. The third factor was labeled "personal anxiety toward the Arabic L2LE" and originally contained five items, three of which were reverse-coded, and two which were direct-coded. After viewing the wording of the items, it was decided to drop the two reverse-coded items, and to label the remaining items PersAnx1 through PersAnx3. Cronbach α analysis rendered the following results: classroom (seven items) = 0.92, teacher/curriculum (five items) = 0.85, and personal anxiety (three items) = 0.55. Only the Cronbach α for the personal anxiety subscale did not exceed the 0.70 threshold.

C. Summary and Correlation Results

The 17 items placed on three subscales were summed to create subscale scores for "L2 classroom environment" (Classroom, range 7 to 49), "L2 teacher/L2 curriculum" (TeachCurric, range 5 to 35), and "personal anxiety toward the Arabic L2LE" (PersAnx, range 3 to 21). Table 3 presents summary statistics for the three subscales stratified by site.

TABLE 3
SUBSCALE SCORES

		Sitea				
Subscale	All mean, sd	KAU-ALI mean, sd	PNU-ALI mean, sd	Imam-ALI mean, sd	ANOVA p-value	Range
Classroom environment	44.0, 7.0	42.5, 8,0	44.7, 4.1	43.6, 9.8	0.6350	7 to 49
Teacher and curriculum	27.8, 7.1	28.0, 8.6	27.2, 6.4	28.8, 7.8	0.6740	5 to 35
Personal anxiety toward Arabic learning environment	12.0, 5.0	12.9, 4.3	12.0, 4.6	11.7, 5.8	0.8110	3 to 21

sd = standard deviation, ANOVA = analysis of variance. aKAU-ALI: King Abdulaziz University Arabic Language Institute, PNU-ALI: Arabic Teaching Institute for Non-Arabic Speakers at Princess Nourah bint Abdulrahman University, Imam-ALI: Al-Imam Muhammad Ibn Saud Islamic University.

Per Table 3, subscale scores were highest for Classroom and lowest for PersAnx, with no statistically significant differences between site means (ANOVA p = 0.6350, 0.6740, and 0.8110 for Classroom, TeachCurric, and PersAnx, respectively). The internal correlation between the Classroom and TeachCurric subscale scores was strong, positive, and statistically significant ($r = 0.70$, $p < 0.0001$), while other correlations were weak, slightly negative, and not statistically significant (Classroom vs. PersAnx $r = -0.13$, $p = 0.2696$; TeachCurric vs. PersAnx $r = -0.12$, $p = 0.4248$).

Correlations between subscales on the identity motivation instrument and the new L2LE instrument are presented in Table 4.

TABLE 4
SUBSCALE CORRELATIONS

Identity Motivation Subscale	Arabic Second Language Learning Subscale	*r*	p
Islamic Motivation	Classroom	0.51*	<0.0001
	Teacher/Curriculum	0.21	0.0588
	Personal Anxiety	-0.11	0.5282
For Cultural Exposure	Classroom	0.49*	<0.0001
	Teacher/Curriculum	0.30*	0.0129
	Personal Anxiety	-0.03	0.7842
Instrumental Motivation	Classroom	0.40*	0.0012
	Teacher/Curriculum	0.36*	0.0013
	Personal Anxiety	0.16	0.0869
To Better Understand Arab Problems/Politics	Classroom	-0.16	0.2611
	Teacher/Curriculum	-0.08	0.7253
	Personal Anxiety	0.01	0.2242

*Statistically significant at $\alpha = 0.05$.

Statistically significant moderate positive correlations were seen between ISLAM and Classroom ($r = 0.51$, $p < 0.0001$), CE and Classroom ($r = 0.49$, $p < 0.0001$), CE and TeachCurric ($r = 0.30$, $p = 0.0129$), INS and Classroom ($r = 0.40$, $p = 0.0012$), and INS and TeachCurric ($r = 0.36$, $p = 0.0013$). Positive correlations that approached but did not meet statistical significance were seen between ISLAM and TeachCurric ($r = 0.21$, $p = 0.0588$) and between INS and PersAnx ($r = 0.16$, $p = 0.0869$), but these correlations were weak. The other subscale scores had weak correlations that were not statistically significant.

IV. DISCUSSION AND CONCLUSION

The Arabic L2LE instrument developed in this study provided evidence of two strong factors – the influence of classroom, and the influence of teacher and curriculum approach. These two factors appeared independent, but were also strongly positively correlated. The instrument also provided evidence of a weaker factor with fewer items, which was personal anxiety for learning L2 Arabic. The highest mean subscale score was for classroom environment, and the second highest was for teacher/curriculum, suggesting that these were both generally seen as positive by ALI Diploma Program learners. However, there was also enough evidence of anxiety about learning L2 Arabic to suggest that this third factor should not be ignored. The weak but positive and almost statistically significant correlation between personal anxiety and the instrumental subscale from the identity-motivation instrument suggests that this anxiety was felt more often by learners who wanted to utilize L2 Arabic for instrumental purposes, such as work or socializing (Gardner, 2000). Although this finding deserves more investigation and should not be over-interpreted, it suggests that there is the opportunity for modifying the ALI L2LE to facilitate increased L2 achievement among Diploma Program learners.

Even though there was only weak evidence of the personal anxiety subscale in this analysis, it was retained in the instrument because it was felt to be important, as it is already known that SLA is in general is impeded by negative emotions in the L2LE (Dewaele, 2019; Khajavy et al., 2018; Oteir & Al-Otaibi, 2019) mainly by reducing the learner's WTC in the L2LE (Dewaele, 2019; Khajavy et al., 2018). Notably, most studies addressing the issue of WTC in the L2LE are in the context of EFL rather than AFL (Khajavy et al., 2018); very few have focused on the L2 Arabic classroom. One notable study of L2 Arabic learners in Iran found that WTC was positively correlated with Arabic language achievement (Mahmoodi & Moazam, 2014). Among the L2 Arabic learners in the US university study described earlier, two primary strategies utilized were "interaction with the teacher" and "speaking" (Brosh, 2019). This finding emphasizes the importance of WTC, as L2 Arabic learners with higher levels of anxiety and lower WTC will be less likely to feel comfortable interacting with the teacher and speaking in class, and this could negatively impact their L2 Arabic achievement.

In the current study, the ALI learners expressed a relatively high mean positive rating of the classroom environment, teacher and curriculum; yet, the mean score for the personal anxiety subscale was also somewhat high. This may relate to the emphasis on activities involving reading, writing, and listening to lectures, rather than those that incorporate conversational and peer learning with respect to L2 Arabic in the ALI context. The MoE curriculum, which has a more academic focus, de-emphasizes actual communication among classroom members and with the teacher in lieu of other learning activities. This may result in learners who feel positive about the classroom, teacher, and curriculum, but who still have anxiety about communicating in Arabic. This is consistent with findings from a previous interview study at Imam-ALI, where learners expressed they had trouble communicating in Arabic with locals because they did not learn the local conversational dialect (Abdelhalim & Alqubayshi, 2020). It is possible that the lack of emphasis in actual communication among learners using the L2 at the ALIs is inadvertently negatively impacting their L2 achievement in general.

Considering this, it seems the personal anxiety subscale should be retained and improved upon in the current instrument so it can continue to be used to measure the L2LE influence at KSAs ALIs. Currently, a validated instrument

already exists for measuring L2 anxiety in general called the Foreign Language Classroom Anxiety Scale (FLCAS) (Botes et al., 2020). A recent meta-analysis of studies using the FLCAS found that there is a negative association between foreign language classroom anxiety and academic achievement in foreign language courses (Botes et al., 2020). The FLCAS has 33 items (Horwitz et al., 1986), and the current instrument's anxiety subscale could be improved using items from the FLCAS in future research. If so, it could produce a more valid and reliable measurement of personal anxiety for L2 Arabic in the L2LE in learners at KSA's ALIs. In addition, instructors at KSA's ALIs should be made aware of this study's findings, as it appears that incorporating more Arabic communication and peer activities into academic learning in the L2LE may actually improve L2 achievement in general. If ALI instructors can find creative ways of incorporating L2 Arabic communication in the learning environment without departing from the standardized MoE curriculum, it could go a long way toward reducing anxiety, increasing WTC, and improving L2 achievement in ALI learners. Additionally, having an improved L2LE measurement instrument could help monitor progress in this effort.

In addition to the weak findings behind the personal anxiety subscale, there are other limitations to this research study. The instrument being developed has only been used on L2 Arabic learners in the Diploma Program at KSA's ALIs, and it is unclear how it would perform in learners from other programs at KSA's ALIs, or in other samples of AFL learners in different L2LEs. Also, only basic evaluations of validity and reliability were performed; ideally, mixed-methods studies that include interviews should be completed to improve instrument validity, and reliability studies should be conducted to estimate test-retest and other types of reliability. The main strength of this study is that it builds upon the existing L2 motivation literature to develop a quantitative measurement approach for the Arabic L2LE, which likely has an important influence on Arabic L2 achievement, but for which there is not a validated instrument available. It also provides insight into the impact of the Arabic L2LE on L2 achievement in Diploma Program learners at KSA's ALIs.

In conclusion, an instrument to measure the influence of the L2LE among L2 Arabic learners in the Diploma Program at KSA's ALIs was developed and piloted, and demonstrated evidence of both validity and reliability. Three instrument subscales were identified, including classroom environment, teacher and curriculum approach, and personal anxiety toward learning Arabic. Respondents expressed increased motivation arising from the classroom environment, teacher, and curriculum, but at the same time expressed anxiety. The lack of emphasis on learning activities utilizing L2 Arabic for social interaction consistent with the emphasis of the standardized ALI curriculum may be responsible for this pattern, but further examination is needed. Future research should focus on improving the reliability and validity of the L2LE Arabic measurement instrument, as well as gaining a better understanding of the role social interaction may play as a potential facilitator for increasing L2 Arabic achievement in KSA's ALI Diploma Program learners.

APPENDIX. FINAL PROPOSED ARABIC SECOND-LANGUAGE LEARNING INSTRUMENT

Please rate your agreement with the following statements about why you are learning Arabic on a scale where 1 is strongly disagree, and 7 is strongly agree.

Statement	1. Strongly Disagree	2	3	4	5	6	7. Strongly Agree
My teachers are patient with students whose Arabic is difficult to understand.	1	2	3	4	5	6	7
My Arabic teachers have interesting teaching styles.	1	2	3	4	5	6	7
I like my Arabic teacher because their class is fun.	1	2	3	4	5	6	7
I find the other students at my Arabic classes really friendly.	1	2	3	4	5	6	7
I always look forward to Arabic classes.	1	2	3	4	5	6	7
It worries me that other students in my class seem to speak Arabic better than I do.	1	2	3	4	5	6	7
I enjoy the activities of our Arabic class much more than those of my other classes.	1	2	3	4	5	6	7
I really enjoy learning Arabic.	1	2	3	4	5	6	7
I am sometimes worried that the other students in class will laugh at me when I speak Arabic.	1	2	3	4	5	6	7
I find the Arabic books that we are studying in class useful.	1	2	3	4	5	6	7
The level of difficulty of my Arabic course materials helps me improve my Arabic.	1	2	3	4	5	6	7
Sometimes I do not understand what I read or listen to in Arabic class.	1	2	3	4	5	6	7
Arabic is one of the most important languages in the world.	1	2	3	4	5	6	7
Learning Arabic is an advantage for me.	1	2	3	4	5	6	7
I can honestly say that I am really doing my best to learn Arabic.	1	2	3	4	5	6	7

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