



# Factors Influencing Blended Personalized Arabic Language Learning

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## Abstract

Foreign students learning Arabic language face problems regarding writing, reading, speaking and listening. This study uses learning modules over the Facebook social media which allow interactivity among learners and facilitators to help them improve the four skills. In addition, learning Arabic is also crucial to others in order to meaningfully understand Al-Quran, the Holy Book for Muslims from all over the world. The quest for effective learning strategies and instructional approach in learning Arabic as a foreign language has been a challenge for educators. Studies have shown that student centered learning must be the approach in any effective language learning to cater for each individual to achieve the learning outcome. The main focus of this study is to identify factors influencing a personalized blended approach for learning Arabic language. A survey was administered on 157 foreign Arabic learners and SEM-PLS 3.0 software was used to identify reliability, validity and factors influencing blended personalized arabic language learning and the contribution of blended learning towards personalized learning. The results showed (i) evidence of a five-dimension measurement model contributing to blended learning, (ii) evidence of a four-dimension measurement model contributing to personalized learning, and (iii) a relationship showing positive impact of blended learning with significant effect on personalized learning at the (.01) level of significance ( $\beta = 0.757$ ,  $t = 16.283$ ,  $p < .01$ ), and (iv) evidences of a reliable and valid model for a blended personalized learning model for Arabic Language Learning. The result also showed that personalization of Arabic as a foreign language learning supported language learning through empowering learners to build up their knowledge and enables them to think critically, work in teams and solve problems collectively. In a blended learning environments learners had the opportunity to actively interpret their experience using internal cognitive operations via the practice of reflective exercises embedded into their Facebook groups' timeline. In this study, a blended combination of face-to-face, self-learning and computer-mediated communication was used. Blended learning indeed contributes to personalization of learning the Arabic language. Moreover, learners were in charge and in control of their learning. Learners collaborated and socially interacted with others. This enabled them to construct knowledge and gained significant learning.

**Keywords:** Personalized Learning; Blended Learning; Arabic as a Foreign Language.

## 1. Introduction

Effective teachers observe whether students are learning or not, and then adjust their practice accordingly [1]. Bataineh [2] conducted a small-scale qualitative sub-study for the purpose of identifying some of the issues faced by non-native learners of the Arabic language. Students reported several issues with respect to the present learning environments. These issues may be categorized into three themes: (i) personalization of learning environments, (ii) flexible delivery method, and (iii) socialized learning environments.

Learners need personalized learning environments that use a variety of delivery methods and different instructional content so that they can learn at their own pace according to their learning style preferences and skills level. This would give instructors more time to help students with the integration of materials learned. The blended learning model would help students to meet their needs. As it combines personalized "face-to-face-driven" and "online-driven" formats, blended learning is becoming an increasingly accepted and popular method for engaging students [3]. In

addition, personalized learning affords the learner a degree of choice about what is learned, when it is learned and how it is learned. It may also provide learners with the opportunity to learn in ways that suit their individual learning styles and multiple intelligences [4][5].

The first theme that was identified as an issue with the present learning environments is related to the personalization of learning environments. Conventional instructional methods do not cater to students' various skills levels and learning styles. The conventional learning environments sometimes are favorable and do improve their knowledge acquisition and skills level in the Arabic language. However, studies had shown that the integration of technology can speed up the process and motivate learners to learn [14]. Conventional learning environments are challenging; all learners are treated equally, yet classrooms are filled with diverse learners. Every learner is unique. Different learners have different learning styles, perspectives, abilities, strengths, previous experience, concerns and agendas in their learning environments [6]. According to Universiti Kebangsaan Malaysia Centre of Excellence for Learner Diversity [7], "Learner diversity refers to an all-inclusive, collective mixture of human differences and similarities along a given dimension. Dimensions of diversity

include culture, ethnicity, religion, gender, age, disability, learning styles, educational background, and personality.” Likewise, Sivapunniam [8] adds that:

*Learner Diversity has always been a major concern in the second language classroom. Due to cultural and learning style differences, students often find themselves in very diverse stages of learning in the same class. Teachers are well aware of the problem but due to the large number of students in the class, very limited contact hours and a very exam oriented education system, they are unable to do much to cater for diverse learners. Teachers often concentrate on the high flyers and the mediocre students. The weak students, who need more attention and guidance, are often neglected. To cater for the assorted needs of diverse learners, lessons must be very learner centered. Thus, to take account of the new electronic teaching and learning environments, a new method is needed to accommodate the learning process requirements and to develop curricula and instruction methods that can cater for all learners’ needs.*

The second theme that was identified as an issue is related to the use of a flexible delivery method. A flexible delivery method can create more opportunities for teacher cooperation and also enables students to increase their language skills acquisition. Thus teachers can help students to improve and can reduce the time spent on routine tasks. Blended learning environments can save students and teachers time because students can collaborate with each other and teachers can develop new roles in the learning environment. Moreover, blended learning offers the potential to create effective training, to save time and money for the educational institution, to make training more convenient for learners, and to offer the learner the chance to access language training [9]. Blended learning designs allow interactions between students and teachers, students and other students, students and a wider range of content resources and pathways, and students and outside resources which are available any time and any place, as well as provide information about real-time proficiency levels to students, teachers, parents and administrators [10]. The implementation of blended learning provides greater student control and flexibility in terms of student learning opportunities. In addition, blended learning can provide solutions or consultation services for students and instructors when help is needed [10].

The third theme is related to socialize learning environments. A social network such as Facebook offers a learning environment where students are able to gain help from native speakers and to communicate with each other to enhance their writing skills. Thus, students are able to learn from Facebook through useful writing activities and communication with each other. Facebook encourages students to be more actively engaged with the subject they are learning, which makes the learning process more meaningful and motivating, and students can share and exchange rich information within their social network. Besides, Facebook provides a rich avenue for social communication and gives teachers and learners the opportunity to communicate with each other. Also, the use of a social network increases opportunities for students to actively participate in the development of their writing skills [11] [12] [13].

## 2. Methodology

The research respondents were 157 foreign learners (85 females; 72 males) from Malaysia registered on the program of Arabic as foreign language at Al al-Bayt University Language Center for the second semester of the 2014-2015 academic year. This research adopted Din [14] [15] theoretically and empirically-based design and development approach. According to Din [14] the approach also known as “the iterative triangulation participatory design and validation method or in short the Participatory Design (PD) method”. The approach has six main phases (i) feasibility study,

(ii) needs analysis, (iii) design, (iv) development, (v) training & implementation, and (vi) maintenance & model development. Figure 1 shows the six phases of the development processes while Figure 2 shows the design processes for the personalized Arabic as a foreign language courses. Each learner had to complete Arabic placement test and an index of learning style (ILS) questionnaire. Thus in each language level the distribution of learning style preferences was known to the instructor. The instructor then endeavored to balance the activities of instruction to cover all the learning style dimensions for each language level.

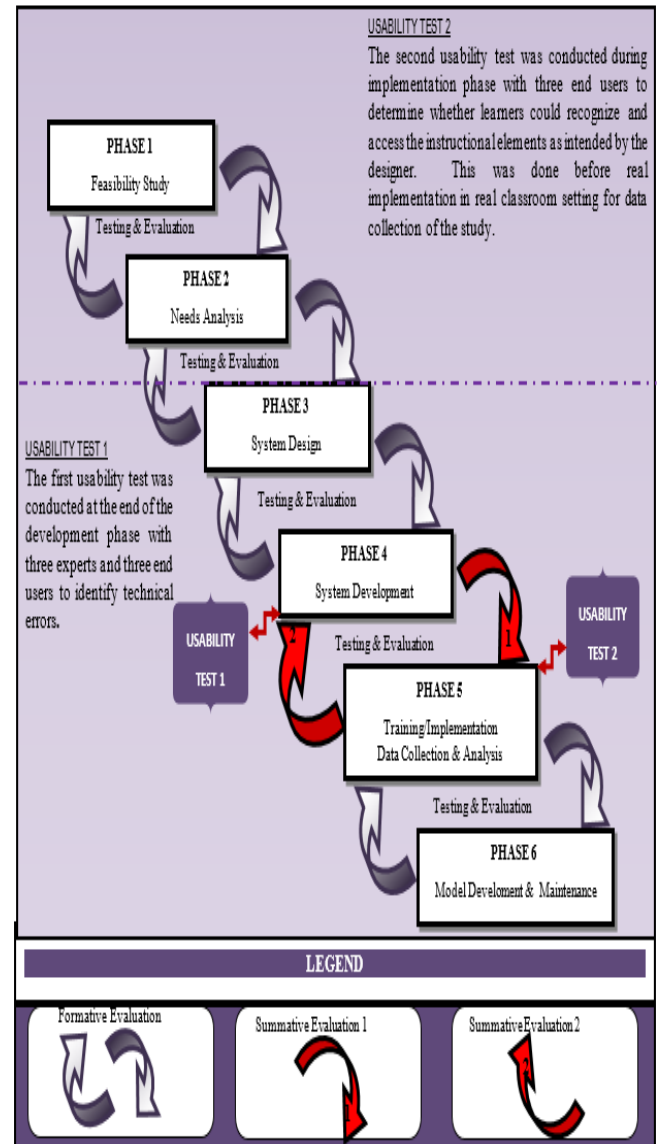


Fig. 1: Development Processes of BPALL as adopted from Din [14] [15]

A survey questionnaire was used to test relationships among the variables of the study after assessing the developed module for its usability. The questionnaire is the main tool used in this study to empirically test the research hypotheses. The results of analyses confirmed that the instrument was reliable for measuring Personalized Learning (PL) and Blended Learning (BL). When BL construct was pretested with 40 learners the Cronbach’s alpha was found to be 0.981 and in actual implementation with 157 learners the alpha score was 0.918. For PL construct, when the Cronbach’s alpha pretested with 40 learners was 0.974 and in actual implementation with 157 learners it was 0.930. As a result, the final instrument for Blended Learning was finalized based on Din [14] [15]; the PL instrument was finalized based on work done by Al-Mashakbh [16] by adding six items to measure the learners’ objectives. This research used partial least squares-

structural equation modeling (PLS-SEM) to analyze the data on the proposed BPALL. Hair, Ringle, and Sarstedt [17] state that: *...in situations where theory is less developed, however, researchers need an alternative approach to examine structural models if the primary objective is not theory confirmation. Thus, because of its prediction orientation, PLS-SEM is the preferred method when the research objective is theory development and prediction.*

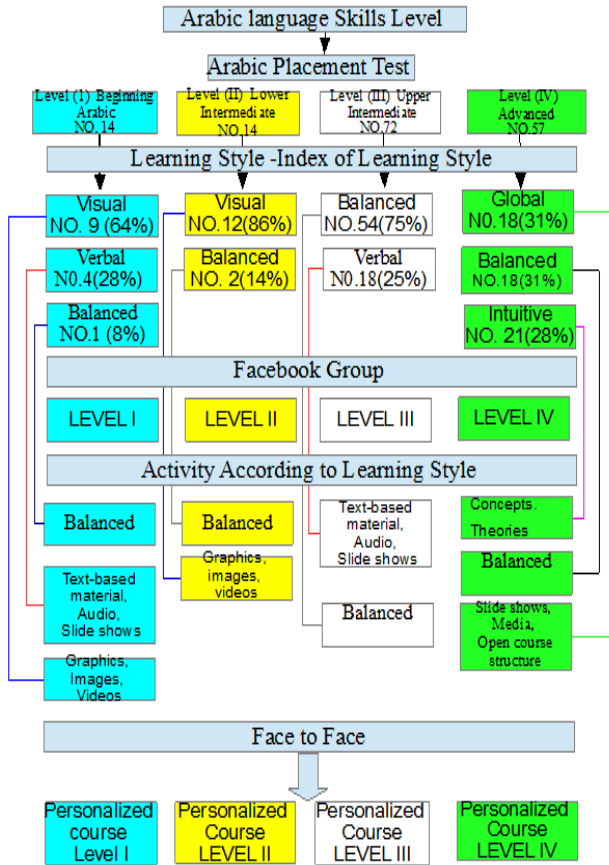


Fig. 2: Design Processes of Personalized Arabic as a Foreign Language Courses

### 3. Findings & Discussion

The first hypothesis aim to test the five factors influencing blended learning while the second hypothesis is to test the four factors influencing personalized learning. The third hypothesis test the effect of blended learning on personalized learning. To test the research hypothesis, partial least square-structural equation modeling (PLS-SEM) analysis was performed using the SmartPLS 3.0 software [18].

Partial least squares analysis can evaluate a theoretical structural model and a measurement model synchronously [17]. Firstly, to establish convergent validity, measures that should be related theoretically are also related according to the analysis results. More specifically, convergent validity identifies the proportion of variance for each factor [19]. In this study, the criteria for adequate convergence were (i) factor loadings between indicators and respective latent variables should be greater than 0.5, (ii) composite reliability and Cronbach's alpha coefficients should be greater than 0.7 for all latent variables, and (iii) average variance extracted (AVE) values should be greater than 0.5 [20] [21] [22] [23] [24] [25] [26]. Table 1 shows the summary of Convergent Validity results, as can be seen all criteria for adequate convergence were achieved. To sum up, based on the findings it can be concluded that the measurement model for the both blended learning and personalized learning fits the requirements for establishing convergent validity.

To establish discriminant validity, measures that were found to be related are also theoretically related. According to Hair et al. [19], discriminant validity assumes that items should correlate higher among their constructs than they correlate with other items from other constructs that are theoretically supposed not to correlate. Discriminant validity indicates a lack of correlation among the variance of constructs [27] and, as mentioned previously, a confirmatory evaluation of discriminant validity can be done by assessing the measurement model [28]. In this study two evaluation criteria were used to assess discriminant validity: (i) item cross-loadings on various constructs (Table 2) and (ii) following the Fornell and Larcker [21] criterion of comparing the correlations between constructs and the square roots of AVEs (Table 3). According to Sin et al. [29] if "all the values on the diagonals were greater than the corresponding row and column values indicating the measures were discriminant". Henseler et al. [30] stated that Fornell-Larcker [21] criterion do not reliably detect the lack of discriminant validity in common research situations. Therefore, Henseler et al. [30] suggested an alternative approach, based on the multitrait-multimethod matrix, to assess discriminant validity the heterotrait-monotrait ratio of correlations HTMT. Therefore, the discriminant validity was tested using HTMT (Table 4). As can be seen in Table 2, 3 and 4, all criteria for adequate discriminant validity were achieved. Thus, a valid and reliable measurement models for BPALL were established.

Subsequently, the predictive power of the model was measured by analyzing the variance explained R Square ( $R^2$ ), the effect size measure F Square ( $F^2$ ) and predictive relevance Q Square ( $Q^2$ ). The quality of the structural model can be assessed by  $R^2$ , which shows the variance in the endogenous variable that is explained by the exogenous variables. Cohen [31] proposes that the  $R^2$  value of 0.10 should be a minimum acceptable level and suggests that there are large magnitudes of effect when  $r = 0.50$ . Also, medium-sized effects are placed between 0.1 and 0.5. To determine the significant of the effect sizes Cohen [31] guideline was used. Cohen [31] proposed the following guideline to measure the effect size: .02 represents a "small" effect size, .15 represents a "medium" effect size, and .35 represents a "high" effect size. The effect size measure  $Q^2$  is used to assess predictive relevance ( $Q^2$ ) of inner model paths to the endogenous variable [32]. Applicable only to reflectively modeled endogenous factors, according to Smith et al. [32] a  $Q^2$  value above 0 indicates that the model is relevant to predicting that factor. Table 5 shows the summary of The Predictive Relevance of the Model ( $R^2$ ,  $F^2$  and  $Q^2$ ) where all criteria for adequate convergence were achieved.

Smart PLS 3.0 was used to test the hypothesized relationships between the constructs (BL and PL) using the PLS algorithm, bootstrapping method (5000 resamples) was used to test the significance of the path coefficients and the loadings [32]. Also to assesses the predictive relevance of the model the blindfolding procedure were used [30]. The results provided in Table 6 showed that the positive and significant effects. To sum up, the results shows that BL construct was measured by five first-order constructs, namely, Content, Delivery, Service, Outcome and Structure. These constructs explained the BL construct well. Also, the results show that the PL construct was measured by four first-order constructs, namely, Pace, Method, Content and Objective. These constructs explained the PL construct well. And finally BL contribute on PL. Figure 3 summarize results from Table 6 in graphical form.

**Table 1. Result of Convergent Validity**

Convergent Validity				
Construct		Reliability (α)	Composite reliability	Average Variance Extracted (AVE)
Blended Learning	Delivery	0.83	0.87	0.54
	BLContent	0.84	0.89	0.62
	Outcome	0.80	0.86	0.50
	Service	0.77	0.87	0.68
	Structure	0.91	0.93	0.53
Personalized Learning	Method	0.60	0.83	0.71
	Objective	0.79	0.87	0.70
	PLContent	0.79	0.85	0.50
	Pace	0.88	0.91	0.68

**Table 2. Factor Analysis and Cross Loading**

	BLContent	Delivery	Method	Objective	Outcome	PLContent	Pace	Service	Structure
BLContent1	<b>0.81</b>	0.25	0.39	0.55	0.46	0.32	0.33	0.53	0.22
BLContent2	<b>0.83</b>	0.37	0.49	0.60	0.44	0.37	0.34	0.55	0.20
BLContent3	<b>0.82</b>	0.25	0.45	0.55	0.49	0.32	0.28	0.48	0.32
BLContent4	<b>0.73</b>	0.19	0.36	0.47	0.45	0.39	0.32	0.43	0.17
BLContent5	<b>0.73</b>	0.17	0.36	0.59	0.51	0.46	0.38	0.54	0.26
Delivery1	0.24	<b>0.71</b>	0.16	0.19	0.09	0.15	0.28	0.22	0.12
Delivery2	0.26	<b>0.82</b>	0.08	0.17	0.11	0.14	0.13	0.14	0.24
Delivery3	0.21	<b>0.69</b>	0.08	0.16	0.04	0.00	0.21	0.20	0.13
Delivery4	0.26	<b>0.77</b>	0.10	0.22	0.09	0.09	0.21	0.20	0.27
Delivery5	0.24	<b>0.75</b>	0.05	0.12	0.04	0.07	0.19	0.14	0.23
Delivery6	0.17	<b>0.64</b>	0.06	0.09	0.12	0.09	0.04	0.09	0.14
Method4	0.49	0.15	<b>0.88</b>	0.56	0.39	0.25	0.44	0.58	0.19
Method5	0.39	0.05	<b>0.81</b>	0.50	0.13	0.22	0.35	0.48	0.03
Objective1	0.53	0.18	0.42	<b>0.64</b>	0.24	0.38	0.48	0.54	0.29
Objective2	0.44	0.16	0.40	<b>0.46</b>	0.27	0.35	0.32	0.39	0.25
Objective3	0.46	0.14	0.42	<b>0.78</b>	0.16	0.37	0.37	0.50	0.15
Objective4	0.59	0.14	0.60	<b>0.84</b>	0.42	0.40	0.51	0.64	0.21
Objective5	0.69	0.26	0.55	<b>0.88</b>	0.32	0.41	0.53	0.66	0.17
Outcome1	0.39	0.09	0.23	0.27	<b>0.67</b>	0.37	0.27	0.41	0.26
Outcome2	0.43	0.02	0.30	0.25	<b>0.74</b>	0.30	0.22	0.34	0.07
Outcome3	0.44	0.16	0.16	0.20	<b>0.74</b>	0.44	0.12	0.27	0.12
Outcome4	0.36	0.01	0.14	0.23	<b>0.68</b>	0.30	0.17	0.30	-0.02
Outcome5	0.49	0.12	0.26	0.30	<b>0.76</b>	0.48	0.29	0.43	0.20
Outcome6	0.41	0.04	0.27	0.31	<b>0.66</b>	0.44	0.21	0.29	0.10
PLContent1	0.29	0.05	0.03	0.28	0.31	<b>0.66</b>	0.08	0.21	0.17
PLContent2	0.34	0.08	0.26	0.37	0.35	<b>0.72</b>	0.23	0.34	0.20
PLContent3	0.40	0.14	0.27	0.38	0.47	<b>0.76</b>	0.20	0.38	0.29
PLContent4	0.31	0.10	0.02	0.24	0.40	<b>0.66</b>	0.27	0.32	0.05
PLContent5	0.20	-0.04	0.23	0.29	0.26	<b>0.61</b>	0.29	0.31	0.07
PLContent6	0.41	0.16	0.28	0.39	0.50	<b>0.76</b>	0.35	0.43	0.21
Pace1	0.26	0.19	0.35	0.35	0.20	0.18	<b>0.84</b>	0.58	0.07
Pace2	0.25	0.19	0.36	0.43	0.15	0.25	<b>0.79</b>	0.56	0.14
Pace3	0.52	0.24	0.45	0.63	0.36	0.41	<b>0.84</b>	0.69	0.24
Pace6	0.15	0.17	0.27	0.26	0.10	0.16	<b>0.74</b>	0.49	0.03
Pace8	0.44	0.21	0.48	0.58	0.37	0.36	<b>0.90</b>	0.71	0.25
Service2	0.57	0.25	0.48	0.55	0.45	0.38	0.51	<b>0.81</b>	0.12
Service3	0.43	0.13	0.50	0.56	0.34	0.38	0.72	<b>0.81</b>	0.19
Service5	0.59	0.17	0.58	0.67	0.41	0.44	0.63	<b>0.85</b>	0.22
Structure1	0.34	0.18	0.07	0.21	0.22	0.19	0.22	0.19	<b>0.75</b>
Structure10	0.15	0.16	0.00	0.08	0.05	0.20	0.16	0.11	<b>0.70</b>
Structure11	0.17	0.21	0.13	0.18	0.07	0.14	0.23	0.19	<b>0.73</b>
Structure2	0.28	0.20	0.12	0.18	0.13	0.07	0.17	0.17	<b>0.75</b>
Structure3	0.24	0.03	0.14	0.17	0.15	0.21	0.14	0.19	<b>0.76</b>
Structure4	0.16	0.24	0.08	0.11	0.14	0.18	0.10	0.18	<b>0.75</b>
Structure5	0.27	0.25	0.21	0.18	0.21	0.25	0.12	0.14	<b>0.77</b>
Structure6	0.24	0.32	0.11	0.19	0.18	0.26	0.11	0.18	<b>0.73</b>
Structure7	0.23	0.29	0.08	0.17	0.13	0.16	0.10	0.08	<b>0.73</b>
Structure8	0.11	0.07	0.01	0.07	0.13	0.20	0.09	0.12	<b>0.67</b>
Structure9	0.13	0.14	0.12	0.13	0.00	0.06	0.10	0.10	<b>0.67</b>

\*Bold values are loadings for items which are above the recommended value of 0.5

**Table 3. Discriminant Validity Analysis: Fornell and Larcker**

	BLContent	Delivery	Method	Objective	Outcome	PLContent	Pace	Service	Structure
BLContent	<b>0.8</b>								
Delivery	0.3	<b>0.7</b>							
Method	0.5	0.1	<b>0.8</b>						
Objective	0.7	0.2	0.6	<b>0.8</b>					
Outcome	0.6	0.1	0.3	0.4	<b>0.7</b>				
PLContent	0.5	0.1	0.3	0.5	0.6	<b>0.7</b>			
Pace	0.4	0.2	0.5	0.6	0.3	0.4	<b>0.8</b>		
Service	0.6	0.2	0.6	0.7	0.5	0.5	0.7	<b>0.8</b>	
Structure	0.3	0.3	0.1	0.2	0.2	0.2	0.2	0.2	<b>0.7</b>

\*The square root of the AVE (represented diagonally in bold) is greater than its correlation with the other constructs (represented by the off-diagonal numbers)

**Table 4. Heterotrait-Monotrait Ratio of Correlations HTMT**

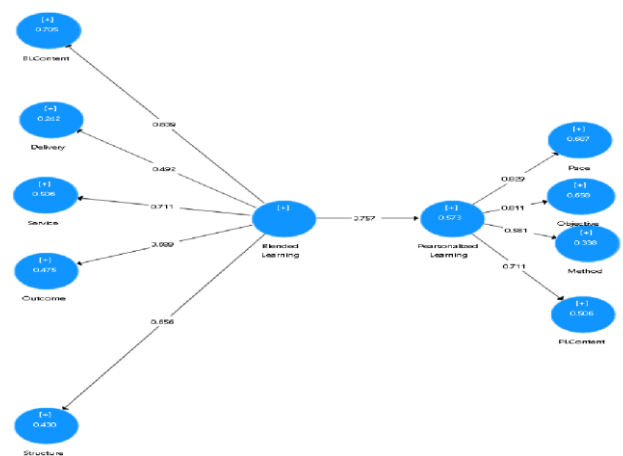
	Delivery	BLContent	Method	Objective	Outcome	PLContent	Pace	Service	Structure
Delivery	0.7								
BLContent	0.6	0.4							
Method	0.7	0.7	0.2						
Objective	0.7	0.9	0.3	0.9					
Outcome	0.6	0.7	0.1	0.4	0.4				
PLContent	0.5	0.6	0.2	0.4	0.6	0.7			
Pace	0.8	0.5	0.3	0.6	0.6	0.3	0.4		
Service	0.7	0.8	0.3	0.9	0.9	0.6	0.6	0.9	
Structure	0.8	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2

**Table 5. The Prediction Relevance of the Model (R2, F2 and Q2)**

Dimensions	R Square	F Square	Q² (=1-SSE/SSO)
<b>Blended Learning</b>			
Delivery	0.2	0.3	0.1
BLContent	0.7	2.4	0.4
Outcome	0.5	0.9	0.2
Service	0.4	1.0	0.4
Structure	0.5	0.8	0.2
<b>Personalized Learning</b>			
Objective	0.7	1.9	0.6
Method	0.3	0.5	0.3
PLContent	0.5	1.0	0.3
Pace	0.7	2.2	0.5

**Table 6. Result of the inner structural model**

Hypothesis	Relations	Path coefficient	Std Dev	T Statistics	P Values	Decision
H1	BL → Delivery	0.492	0.026	32.204	0.000	Supported
	BL → Content	0.839	0.126	3.911	0.000	Supported
	BL → Outcome	0.684	0.063	11.001	0.000	Supported
	BL → Service	0.711	0.047	15.246	0.000	Supported
	BL → Structure	0.645	0.099	6.653	0.000	Supported
	H2	PL → Method	0.581	0.059	9.832	0.000
PL → Objective		0.811	0.025	32.444	0.000	Supported
PL → PLContent		0.711	0.076	9.324	0.000	Supported
H3	PL → Pace	0.829	0.043	19.190	0.000	Supported
	BL → PL	0.757	0.046	16.283	0.000	Supported



**Fig. 3: Structural Model Results**

This section will discuss factors influencing foreign students' needs in learning Arabic language. The results showed evidence of five-dimension measurement model for blended learning, (ii) a four-dimension measurement model for personalized learning, (iii)

positive impact of blended learning on personalized learning and (iv) evidences of BPALL as a reliable and valid model for a personalized hybrid learning for Arabic language learning. Personalization of Arabic language learning was influenced by four personalization factors which are Method, Objective, Content and Pace. Each learner's pace was determined through his/her score in the Arabic placement test (APT) and his/her learning style preference. The instructor then endeavored to balance the activities of instruction to cover all the learning style dimensions for each language level. Moreover, multiple types of resources and activities such as questions, exercises, examples, and projects to cover each pace were designed in order to personalize the method of learning Arabic language learning for each language skills level. Furthermore, different forms of contents for each language skill level content were made available through the Facebook group, for example, text-based material, audio, lesson objectives, slideshows, graphics, images, videos, demonstrations, and slides with multimedia and animations which were efficient to personalize Arabic language learning. Figure 4-7 are some sample of the sample activities from the module.



Figure 4. Level 1 Discussion



Figure 5. Sample Visual Content

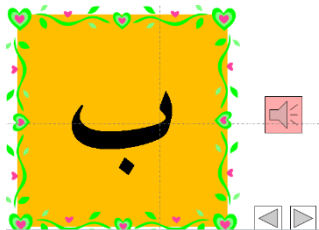


Figure 6. Level 1 Audio-Visual Activity



Figure 7. Level 1 Audio-Visual Song

The last factor of personalized learning is the objective. As mentioned above, each student is unique, so it follows that each student has his/her own learning objective based on his/her needs and interests as well as the social environment he/she experiences. Thus, presenting curriculum topics as learning goals enabled learners to learn according to their learning styles. Accordingly, personalization of the objectives was achieved through planning the lecture time so that it would cover each objective, designing a variety of content areas to meet learners' needs, aligning learning objectives with the delivered materials that covered learners' needs, and offering access to a wide range of resources through using the Facebook group asynchronously for each language skill level.

The results also showed evidence of five blended learning factors influencing personalized learning which are content, structure, objective, service and delivery. This result is in line with studies done by McDonald et al. [33] and Din [14]. Blended learning environments provided learners with feedback to practice their skills in Arabic as a foreign language. Results showed that blended content was ensured using technology in the course that was relevant to the learners' needs and expectations, providing relevant reading materials for the course, linking theory and practice, knowledge applicable in real life, and covering all Arabic language as a foreign language skill. Facebook as a delivery method allowed students to express themselves beyond physical

features and labels, share experiences, discuss interests, influence one another, make and develop relationships with individuals of similar interests, rapidly share and exchange rich information, and practice Arabic language skills.

In addition, the results showed that the quality service was delivered. This was done by ensuring a well-prepared instructor who would help learners determine their learning needs; using reflection activities such as face-to-face instruction and online resources; responding to comments and suggestions within a reasonable amount of time, and providing online support for social interaction to elaborate concepts and help students to easily build their language skills. Results also showed that the blended learning approach had supported students in achieving the learning outcome of the course.

As for the quality structured course delivered, it was due to (i) adapting learner needs for specific content, media, and learning styles to guide the development and delivery of learning activities that met the course learning objectives at the same time as meeting the learners' objectives; (ii) motivating learners through the use of interactive technology for engaging learners in the learning experience, offering a positive and interactive learning environment, and providing opportunities for support and self-reflection; (iii) provision of a collaborative learning environment through the Facebook groups; (iv) designing a curriculum according to program goals and appropriate pedagogical strategies for blended learning environments and providing access to online resources and support for exploratory learning to enhance learners' learning; and (v) regular evaluation through providing opportunities for self-evaluation.

## 5. Conclusion

There should be a concerted effort to design educational experiences to enable Malaysian students to learn Arabic as a foreign language. Tailoring learning according to the individual needs of each student is the personalized learning approach to education. Personalization of Arabic language learning can be achieved through the use of a blended model, where Malaysian students, after acquiring specific knowledge of the Arabic language, could practice and continue to pursue Arabic language learning. The results showed that personalization of Arabic as foreign language learning provided a unique opportunity for learners interested in developing superior-level proficiency in Arabic. Also, personalization of Arabic as foreign language learning supported language learning through empowering learners to build up their knowledge and enables them to think critically, work in teams and solve problems collectively. Also, in the blended learning environments learners had the opportunity to actively interpret their experience using internal cognitive operations via the practice of reflective exercises embedded into their Facebook groups' timeline. In this study, a blended combination of face-to-face, self-learning and computer-mediated communication was used. Moreover, learners were in charge and in control of their learning. Learners collaborated and socially interacted with others. This enabled them to construct knowledge and realize more significant learning. Combining the two models, the blended model and the personalized model, with social learning networks such as Facebook can cater to Malaysian students' needs in learning Arabic as a foreign language. The most significant theoretical contributions of the study are the development and validation of the Blended Personalized Arabic Language Learning (BPALL) model. Moreover, this research also synthesizes knowledge on BL and PL for Arabic learning to make it available for curriculum designers, teachers, and policy makers in usable forms, such as the BPALL model. This research study also contributes to knowledge through the development of new resources for learning Arabic as a foreign language and through the development a BPALL questionnaire to evaluate the BPALL model. This research study also contributes through the utilization

of the universal design of learning approach for blended learning environments which provides useful guidance for curriculum designers to help them design Arabic as a foreign language learning courses that cater for learners' needs in their skills acquisition. To conclude, in order to make the BPALL model more effective and applicable, more research on the effectiveness of the BPALL model is needed.

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## References

- [1] Glickman, C. (1991). Pretending Not to Know What We Know. *Educational leadership*, 48(8), 4-10.
- [2] Bataineh, R. (2017). Evaluation & modelling of blended personalized Arabic language learning for Malaysian students at Al al-BAYT University. PhD Thesis. Bangi: Universiti Kebangsaan Malaysia.
- [3] Jansen, B. A. (2014). New media's support of knowledge building and 21st century skills development in high school curricula. Doctoral dissertation. Austin: University of Texas.
- [4] U.S. Department of Education (2010). Transforming American education—Learning powered by technology: National Education Technology Plan 2010. Washington, DC: Office of Educational Technology, U.S. Department of Education.
- [5] Din, R. (2017). *Asas Pendidikan dan Kejurulatihan ICT*. Bangi: Penerbit UKM.
- [6] Burgstahler, S., & Burgstahler, S. (2013, May 4). Introduction to universal design in higher education. Universal design in higher education: Promising practices. Seattle: DO-IT, University of Washington. Retrieved from <https://www.washington.edu/doit/universal-design-processprinciples-and-applications>.
- [7] Universiti Kebangsaan Malaysia Centre of Excellence for Learner Diversity. Laporan Tahunan Fakulti Pendidikan. Annual Report (2013). <http://www.ukm.my/fpendidikan/wp-content/uploads/2016/05/Laporan-Tahunan-2013-2014-Part-1.pdf>
- [8] Sivapunniam, N. (2009). Virtual Realities: A Blended Learning Approach to Bridge the Gap between Diverse ESL Learners. In Proceedings of 7th International Conference Language and Culture Creating and Fostering Global Communities SoLLsINTEC09 (pp. 283-290).
- [9] Owston, R., Wideman, H., Murphy, J., & Lupshenyuk, D. (2008). Blended teacher professional development: A synthesis of three program evaluations. *The Internet and Higher Education*, 11(3), 201-210.
- [10] Pankin, J., Roberts, J., & Savio, M. (2012). Blended learning at MIT. Retrieved from [http://web.mit.edu/training/trainers/resources/blended\\_learning\\_at\\_mit.pdf](http://web.mit.edu/training/trainers/resources/blended_learning_at_mit.pdf)
- [11] Ahmad, W., Rusli, W., & Mat Daud, N. (2011). Developing Arabic writing skills using Facebook. In: International Language Conference (ILC) 22-24 April 2011, International Islamic University Malaysia.
- [12] Gabarre, S., Gabarre, C., Din, R., Shah, P. M., & Karim, A. A. (2013). Using mobile Facebook as an lms: Exploring impeding factors. *GEMA Online Journal of Language Studies*, 13(3).
- [13] Roblyer, M. D., McDaniel, M., Webb, M., Herman, J., & Witty, J. V. (2010). Findings on Facebook in higher education: A comparison of college faculty and student uses and perceptions of social networking sites. *The Internet and Higher Education*, 13(3), 134-140.
- [14] Din, R., (2010). Development and Validation of an integrated meaningful blended e-training (I-MeT) for computer science Theoretical-Empirical Based Design and Development approach. Unpublished PhD Thesis. Bangi: Universiti Kebangsaan Malaysia.
- [15] Din, R., Norman, H., Kamarulzaman, M. F., Shah, P. M., Karim, A., Salleh, N. S. M., Mastor, K. A. (2012). Creation of a knowledge society via the use of mobile blog: a model of integrated meaningful blended e-training. *Asian Social Science*, 8(16), 45.
- [16] Al Mashakhb, A. (2012). Online individualized multimedia instruction model for engineering. Unpublished PhD Thesis. Bangi: Universiti Kebangsaan Malaysia.
- [17] Hair, J. F., Ringle, C. M. & Sarstedt, M. (2011). PLS-SEM: Indeed a Silver Bullet. *Journal of Marketing theory and Practice* 19(2): 139-152.
- [18] Ringle, C. M., Wende, S., & Becker, J. M. (2015). SmartPLS 3. Bönningstedt: SmartPLS. GmbH, <http://www.smartpls.com>.
- [19] Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the academy of marketing science*, 40(3), 414-433.
- [20] Baozi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1), 74-94.
- [21] Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 39-50.
- [22] Hair, J., & Jnr, B. (2009). BJ, & Anderson, RE (2010). *Multivariate data analysis: A global perspective*. Upper Saddle River, New Jersey: Pearson Prentice Hall.
- [23] Hair, J. (2010). *Multivariate data analysis*. Upper Saddle River, New Jersey: Pearson Prentice Hall.
- [24] Hair, J.F., Black, W.C., Babin, B.J., Anderson, R.E. & Tatham, R.L. (2006). *Multivariate data analysis*. 6th Ed. Upper Saddle, New Jersey: Pearson Prentice Hall.
- [25] Kline, R. B. (2015). *Principles and practice of structural equation modeling*. New York: USA: Guilford publications.
- [26] Nunnally, J. (1978). *Psychometric methods*: New York: McGraw-Hill.
- [27] Malhotra, N., Budhwar, P., & Prowse, P. (2007). Linking rewards to commitment: an empirical investigation of four UK call centers. *The International Journal of Human Resource Management*, 18(12), 2095-2128.
- [28] Campbell, D. T., & Fiske, D. W. (1959). Convergent and discriminant validation by the multitrait-multimethod matrix. *Psychological bulletin*, 56(2), 81.
- [29] Sin, A. B., Zailani, S., Iranmanesh, M., & Ramayah, T. (2015). Structural equation modelling on knowledge creation in Six Sigma DMAIC project and its impact on organizational performance. *International Journal of Production Economics*, 168, 105-117.
- [30] Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the academy of marketing science*, 43(1), 115-135.
- [31] Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.
- [32] Smith, D., Hair, J. F., & Ferguson, K. (2014). An investigation of the effect of family influence on Commitment–Trust in retailer–vendor strategic partnerships. *Journal of Family Business Strategy*, 5(3), 252-263.
- [33] MacDonald, C. J., Stodel, E., Farres, L., Breithaupt, K. & Gabriel, M. A. (2001). The Demand Driven Learning Model: A framework for web-based learning. *The Internet and Higher Education*, 1(4): 9-30.