

## **The Influence of Language on Professional's Learning: A Comparative Study of Two Groups of Pre-Service Teachers in the UAE**

**Dr. Karima Matar Almazroui**  
Curriculum Division Manager  
Abu Dhabi Education Council  
United Arab Emirates

**Dr. Abdurrahman Ghaleb Almekhlafi**  
Associate Professor  
College of Education  
United Arab Emirates University  
United Arab Emirates

### **Abstract**

*In the United Arab Emirates (UAE), most higher education institutions require school teachers to study professional development courses in English, a student's non-native language. This research investigates the influence of language of instruction (both Arabic and English) on pre-service school teachers' performance and attitude toward the Educational Technology Course at the College of Education, United Arab Emirates University. Among the 409 participants 181 school studies the course in Arabic and others (n=228) participants studied the same course in English. Findings of this Research show that students who studied the course in native language, Arabic for this case, has reported to understand the concepts better compared with other group. Students who studied the course in English for the first time has spend more time for study, has communicated less in the class, and has focused more on the language than learning the course content. Students who studied in their native language performed higher in tests compared to the students who studied in English.*

**Key Words:** Education, Professional development, language of instruction,

### **1. Introduction**

In the United States, at least 3.5 million children are identified as Limited in English Proficiency (LEP) (Endo & Miller, 2004). If these schools do not offer special classes for LEP students, immigrant English-language learners face a plethora of problems as they begin to think in a new language. The problems stem primarily from linguistic and possibly from cultural differences. Non-native English language students face difficulties from using a language they have not yet mastered to read, write, communicate, or for thinking, problem solving, explaining, and other academic purposes (Endo & Miller, 2004). Snow (2002) stated that it is difficult to find relevant empirical data or well developed theoretical models of adults studying in English compared to bilingual children studying in the same language. Teaching in English rather than a native language has long been a controversy; along with the controversy is the issue of limiting English to teaching mathematics and science. Some educators believe that if students are to study in English, it should not be perceived as students' first language of instruction.

Helmy (cited in Mahrous, 2006), believes that Arabic students who are studying in English in the University focuses on to retain information rather than to understand it. Most of these students, he added, remain silent because they lack the skills to communicate and argue in another language. From the experience of a dean at the College of Science in Ain-Shams University in Cairo, Egypt, Helmy has taught the same curriculum to two groups of students in two different languages. The group that studied in Arabic required less instruction time, achieved higher grades, and carried out fruitful discussions that reflected depth of understanding compared to the group who had to study in English. From his point of view, teaching in a native language widens the opportunity for learners to express, invent, relate, and communicate (Mahrous, 2006). Shaheen (cited in Mahrous 2006) asserted that teaching in their native language at the university brings life into academic performance.

He added that students who have to study in a non-native language require to have a great competence in that language before they find themselves in a situation where a huge curriculum has to be digested in a language they do not primarily comprehend. Adawi (cited in Mahrous, 2006) declares that the essence of the problems is that students cannot relate what they study in their lives or even to the information they previously studied in another language due to unfamiliarity with the language of instruction (Mahrous, 2006). Research on the impact of instruction language especially in English for non-native English speakers are not a new phenomenon. For instance, English is a dominant language in Israel; it is widely used in all media means and most university textbooks. It is common to hear people speaking English in Haifa compared with other languages, such as Arabic or French. Abu-Rabia (2004) has investigated the anxiety level Israeli students experience when studying in English compared to Hebrew. This research has raised the issue of anxiety related to foreign language (FL) learning. Abu-Ravishes explained different kinds of anxieties, including anxiety students experienced when learning in a FL. This type of anxiety had a negative impact on students' emotions which plagued them with worry, physical insecurity, and the inability to engage in situational learning. This anxiety reflected difficulty coping with new assignments and tasks and was labeled facilitating anxiety. FL anxiety, as research showed, was related to learners' self-expression.

Students of the UAE public schools begin to learn English language basics (phonics, numbers, colors, etc.) in the first grade. These public schools offer English language for 45 minutes a day. English language is practiced exclusively in the English class, while the remaining subjects are taught in Arabic. Normally, children of the UAE are not exposed to the English language before schooling. In UAE, there is a shift toward using English language in the national universities. Students who graduated from public schools may not be prepared for using English for academic purposes. Therefore, instructors may need to take into account the anxiety students may experience. This study aims to investigate the impact of providing training in English language to the professionals in UAE who do not have prior English language experience. Following the context of English language in UAE, subsequent sections present literature supporting the use of native language and pitfalls of using foreign language in professional development courses. The next section provides justification of this study with adequate literatures. The research methodology section details the data collection process. A result of this empirical study has been presented in the subsequent section.

## ***2. Advantages of using Native language for professionals***

Distinguished performance in a first language does not apply necessarily to the second language. Teachers of English Language Learners students often notice the rapid acquisition of social language proficiency compared to academic language skills for children. However, social language proficiency and academic skills may not progress correspondingly for older language learners. Social and emotional factors may inhibit their language development and result in the surpassing of their academic language skills (Harper & Jong, 2004). Research on bilingualism suggests that teachers enjoy several advantages while teaching in native language:

*Reduce the cognitive load:* This includes selecting activities and assignments that require students to draw on their prior knowledge and life experiences. If students are able to relate new information to their own experiences and use this information in life, rigid cognitive information will be meaningful. Teachers need to understand that older learners have more advanced cognitive skills (e.g., memory and analytic reasoning) and may be capable of drawing upon a more sophisticated linguistic and conceptual base than young children. Older learners can take an active part in their learning process. When teachers do not take linguistic and cognitive strengths of older learners into an account, it may result in interfering with their second language development (Harper & Jong, 2004).

*Evaluate teaching strategies and approaches:* These concepts refer to classroom environment, taking into account individual differences, background knowledge and language proficiency. The best classroom environment is where the classroom is student centered. Here the student practices the language most of the time and is allowed to share ideas all the time. English language learning strategies should promote understanding over memorization.

*Reduce the cultural load:* Language is not strings of letters and sounds; language is a medium to transfer culture, religion, information, etc. For instance, UAE students may encounter difficulty adapting the concept of the American Educational system if the course assigned textbooks represent that system. Therefore, teachers have to tie textbooks to students' culture and values. Teachers should provide examples from students' lives and experiences and not be limited to textbook's examples and illustrations.

According to the teachers' guide of Ministry of Education of British Columbia (1999), students suffer at the beginning of their studies of a non-native language; they complain a lot; ask repeatedly for teachers who share their native language, and show depression and anger. Therefore, the Guide suggests that teachers be alert to these symptoms and help students adapt to the new situation.

*Use academic vocabulary:* English-language learners rely on the teacher to use English skillfully. That means the teacher should avoid using oversimplified vocabulary. Instead, the teacher should deliberately model academic language by selecting terms and vocabularies that will help the students learn the required academic language with appropriate contextual clues and other information. This will enable English language learners acquire and practice this language. Teachers should also consider using visual aids and technology means.

*Address English Language Learning needs:* Teaching mature students in a second language differs from teaching in their native language. Teaching strategies and good instruction are not sufficient in a second language (Chamot & O'Malley, 1994). Teachers must understand mature students' needs along with the language demands of their subjects.

*Allow the use of native language when possible:* National Standard Documents, USA, recommends considering language diversity in instruction. L2 learners may acquire the necessary reading skills before they can speak in a second language. The ability to decode is not the goal of L2 instruction. With insufficient vocabulary, limited oral fluency, students become restricted with their language limitedness. Since language is not the target in itself, students should be allowed, when possible, to use their native language (Harper & Jong, 2004). The previous statements which were supported by Short and Spanos (1989) suggest that students need adequate language proficiency and understanding of vocabulary and texts in order to perform academic tasks in a non-native language.

### **3. Pitfalls of using foreign language**

Studying in a non-native language requires a conscious attention to the grammatical, morphological, and phonological aspects of the English language (VanPatten, 1993). Exposure to a comprehensible academic language may not be enough and must be accompanied by understanding the relationship between form and functions of the second language (VanPatten, 1990). Students do not develop or acquire knowledge until they can put information into a context that has a form and meaning. Language is the means that students generally use to bring order and meaning to facts and experience, either by speaking or writing, or by inner monologue of thought. Teachers need to consider how students learn and what they encounter when performing in a second language, such as struggle with language and academic skills simultaneously. Research has identified several challenges while using foreign language to teach professional courses as listed below:

Firstly, students prefer to remain silent in a course taught in foreign language due to struggle with language, language learning experience, language shock and anxiety. This language shock may result in silence preference regardless of their desire to speak English fluently. Language is a vital tool for communication such as telling jokes, and expressing one's ideas and feelings. Students often require several years before they understand lectures effectively. Students face difficulty while sharing their ideas in a non-native language that is yet to be mastered. They fear they did not learn "correct" English, and their writing adopts from their native colloquial language (Zawacki, Hjabbasi, Habib, Antram, & Das, 2007).

Secondly, when students are not confident in the language they are using, they may experience frustration, anxiety, failure, and powerlessness. Many students fear communicating unless they are certain of the accuracy of their statements, fearing of being the negative evaluation from the instructor or from more competent students (Spolsky, 1989). However, despite language anxiety and fear, some of them wish to participate and be able to read and write fluently (MacIntyre & Gardner, 1994).

Thirdly, when struggling with language, another important challenge many ELLs face is trying to understand the curriculum and pedagogical tools, especially if it reflects a different writing style or heritage. While mature students may spend more time doing homework, tasks, reading and reflecting on articles, ELL students may spend additional time translating and making sense of the textbook if they don't have the skill to read in that language.

#### **4. Justification for this study**

Most studies on the influence of bilingualism on academic skills have been conducted on samples of children who were partially bilingual at the beginning of their schooling. As students enter college, there is a need to show a more professional use of academic English. The challenging academic teaching materials require a deliberate integration of linguistic representations and conscious monitoring of higher-level discourse processes, which is considered a critical transition period when reading begins to take on new academic functions. Does extensive exposure to English result in English proficiency? Lightbown and Spada (1990), Spada and Lightbown (1993), and Swain (1995) argue that exposure alone to a second language is not sufficient for language mastery. Even though interaction is vital for L1 and L2 learners, researchers claim that it is different for older students who study in a non-native language and are required to negotiate the abstract concepts and complex language of secondary school classrooms and textbooks (Lightbown & Spada, 1990; Spada and Lightbown; 1993; & Swain, 1995). There is a difference between second language used for communication versus academic purposes. Cummins (1981) made a distinction between basic interpersonal communicative skills (BICS) and cognitive academic language proficiency (CALP) that represent cognitive demands and contextual support. Both BICS and CALP require a sufficient exposure and use of English. BICS are context embedded and less cognitively demanding, and BICS are often acquired to a functional level within about 2 years of initial exposure to the second language. On the other hand, CALP is context reduced, cognitively demanding, and requires at least 5 years to adjust to the level of the native speaker in CALP of the second language. Cummins and Swain (1986) had also stated that CALP is transferable across languages. Based on the above statement, ELL students will need a minimum of 5 years of English exposure and use to be able to use the second language sophisticatedly.

Research has shown that second language is best acquired gradually through extreme immersion in "academically rigorous tasks in low-anxiety language learning contexts" (Garcia & Beltrán, 2003, p. 197). When students are in a setting where they have to study in English, or any other new language, they learn information as they learn the vocabulary of that language. English language learner (ELL) students have to have a concrete foundation and deep knowledge of the English language to ensure a successful learning (Garcia & Beltrán, 2003). To study and function in this new language, English language learners have to demonstrate their communication skills, thinking, and learning skills in English. Growth in language acquisition requires concurrent growth in the four language modes: listening, speaking, reading, and writing, indicating that planning and practicing language skills are the cornerstone of development of understanding in any school subject or college courses offered in English. ELL students have to master language mode sub-skills as well. Each school subject possesses unique language requirements. For example, writing a reflection differs from writing a research paper or a summary.

To develop a response to its tone or mode, one needs to have a feel for the overall flow of the passage, structure, and the appropriate vocabulary. Newly recruited school teachers are required to attend several professional courses prior to join in their respective schools in UAE. As a result of the College of Education (COE) accreditation, most courses in the COE at the United Arab Emirates University are taught in English, a non-native language. English is not the students' native language and is usually limited to classroom use, such as in English language courses. Not prepared prior to college to use English as a learning acquisition language or a language of academia, students communicated in Arabic only. In school, students used English in the English class only while the remaining subjects were taught in Arabic. This study primarily investigated the differences if any in academic performance between two groups of students. One group has studied the course in Arabic language which is their native language and the other group has taken the course in English language. These study further attempts to investigate how students perceive benefit and challenges associated with the choice of language.

#### **5. Research Methodology**

##### **5.1. Sample**

The participants in the present study were pre-service teachers. The pre-service teachers are being selected to teach in different schools in UA. As a part of teachers training, they were studying Educational Technology Course taught in English at the College of Education (COE), United Arab Emirates. The participants were all female pre-service school teachers. The total number of participants was 409; 181 students who studied the course in Arabic (called Arabic group); and 228 participants studied the course in English (Called English group). The study sample represent (85%) of the total population enrolled for the course.

All participants studied Educational Technology as a core course. As a result of COE launch of seeking international academic accreditation in the 2000 academic year, students were obligated to study the course in English, where pre-accreditation cohorts had the choice to study the course in Arabic. This course was the only course in the college that prepared pre-service teachers for the field pertaining to technology integration in the classroom. The aim of this course was to introduce educational technology as an essential and integral component of the teaching/learning process and to highlight the different roles it played in improving the effectiveness of learning and instruction. The course covered the learning principles and strategies for integrating technology into teaching. It introduced the teacher's role in designing, developing, utilizing, and evaluating instructional technology effectively. The candidates learned the production skills and the effective procedures for selecting, producing, utilizing and evaluating various instructional media.

## **5.2. Instrument**

This study used a questionnaire to collect data. An Arabic version of the questionnaire was used. The questionnaire used in the study was developed by the researcher and piloted and validated by a number of experts from the United Arab Emirates from different fields, such as Curriculum and Instruction, the English Department, and the Arabic Department. The questionnaire consisted of 24 items on a 5-point scale ranging from strongly agree (5) to strongly disagree (1). These items were categorized by the researcher into six themes for easy analysis and discussion: Course content, Assessment, Perceived Attitude, Language of instruction, Relevance, and Teaching method. In addition, the questionnaire included some open-ended questions asking participants to outline advantages and disadvantages of studying in native versus non-native language.

## **5.3 Post-test**

The assignment grade, mid-term grade and final grades of the participants were collected for the post-test analysis. The test covered all topics in the course that participants studied regardless of language of instruction. The topics covered in the course were identical in Arabic and English. In fact, the Arabic content was a translation of the English content. Hence, the content was controlled for during the whole course period. Similarly, the test for the participants who studied the course in a native language was a translation of the test that was in a non-native language. The assignments and projects in the course were also used to measure language of instruction effect on achievement. The projects used were PowerPoint, Web Site Design, Video, Transparencies, Excel, and Access. These projects had the same structure, requirements, and grades across all groups regardless of the language of instruction.

## **5.4 Procedures**

The questionnaire was validated, and piloted, the reliability alpha was 0.93. Near the end of the semester, the questionnaire was distributed by researchers to all students studying the technology course at the College of Education. The return rate was 85%, which is considered the study sample by researchers of this study. In addition, the post-test was administered at the end of semester. Using SPSS (statistical package for social sciences), independent samples t-tests were conducted to investigate differences between the two groups pertaining to studying the course in native versus non-native language. These groups are Arabic Group that where medium of instruction was in Arabic. The other group is English group where medium of teaching instruction was in English. Reverse scale items are presented in shaded rows. Several correlation analyses were conducted to examine for associations between language and academic performance in different assessment. Participant's opinion regarding the advantages and disadvantages were collected through the open-ended questions and presented in percentages and frequencies.

## **6. Results and Discussion**

### **6.1 Demographics**

Average age of the participants was twenty six. All the participants were female. About 57 percent of the participants were holding a bachelor level of education. Other 42 percent of the participants were having diploma in teaching. 43 percent of the participants were attending the course in Arabic and 57 percent of the participants were attending the course in English.

## **6.2 Course content**

This section was measuring student's perception in terms difficulty in understanding the course content. Both Arabic and English language section students were asked five questions. These were (1) Content is easy to understand, (2) I need help to understand content, (3) Studying course content helps me to pursue and study more, (4) I can retain course content easily, and (5) Understanding of course content is limited. Reverse scale items are presented in shaded rows. Table 1 shows that Arabic group found the course content was easier to understand, studying course content in Arabic helps them to pursue and study more, and they can retain course content easily. The mean differences between Arabic group and English group are statistically significant. On the other hand, English group needs extra help to understand course content which is also statistically significant. There is enough evidence to support the claim that teaching in Arabic makes the course content much easier to understand compared with teaching in English.

## **6.3 Assessment**

This section was measuring student's perception in terms difficulty in approaching assessments in relation to the language of instruction. Both Arabic and English language section students were asked three questions. These were (6) can pass the course easily, (7) Course assignments help me retain information, (8) There are obstacles in understanding exam questions. Reverse scale items are presented in shaded rows. Table 2 shows that Arabic group found the assessments were easier to approach compared with English group. For instance, Arabic group reported that they can pass the course easily and course assignments help me retain information compared with English group. The mean differences between Arabic group and English group are statistically significant. On the other hand, English group found there are more obstacles in understanding exam questions compared with Arabic group and that is also statistically significant. There is enough evidence to support the claim that teaching in Arabic makes assessment easier to approach compared with teaching in English.

## **6.4 Perceived Attitude**

This section was measuring impact of language on pre-school teacher's perception and overall attitude toward the course. Both Arabic and English language section participants were asked five questions. These were (9) With motivation, any student can learn course content, (10) I can study course without making a lot of effort, (11) It is very hard to study course regardless of instructor's effort, (12) I believe course pushes me to memorize rather than understand, (13) I fear failure in this course. Reverse scale items are presented in shaded rows. Table 3 shows that Arabic group perceived the course was easier to learn and they can study the course without making a lot of effort compared with English group. The mean differences between Arabic group and English group are statistically significant. On the other hand, English group found that it was very hard to study course regardless of instructor's effort, they had to depend on memorizing rather than understanding, and they were worried that they may fail behind in the course compared with Arabic group. The mean differences English group and Arabic group are statistically significant. There are enough evidences to support the claim that teaching in Arabic creates more positive attitude towards the course compared with teaching in English.

## **6.5 Language of instruction**

This section was measuring direct opinion about the language of instruction on the course usefulness. Both Arabic and English language section participants were asked five questions. These were (14) Language is appropriate to course content and references, (15) Language needs a lot of effort as I am not specialized in it, (16) Language helps me communicate better, (17) I believe I will not benefit from course because of language, (18). I believe there is no need to study in this language as I will not use it in the future, (19) Language restrict my interaction with the teacher, (20) I feel bored in class because of language of instruction, (21) Language of instruction helps to understand technical vocabulary and specific required words. Reverse scale items are presented in shaded rows. Table 4 shows that result of two groups view on the language of instruction and perceived course usefulness. The Arabic group found language was more appropriate to course content and references, and it helped them to communicate better compared with English group. The mean differences between Arabic group and English group are statistically significant. On the other hand, English group found that due to the English language, extra effort was needed, they probably not achieve much benefit from the course, and it was unnecessary to learn in English as they will not going use it further. English group has also faced more restriction in interacting with the course instructor and was feeling bored in the course due to English language.

The mean differences English group and Arabic group are statistically significant. Question (21) “Language of instruction helps to understand technical vocabulary and specific required words” was not statistically significant. There are enough evidences to support the claim that teaching in Arabic makes the course more useful compared with English to the participants.

### **6.6 Relevance**

This section was measuring pre-school teacher’s perception about how they feel the relevance of this course to their profession and current situation. Both Arabic and English language section participants were asked two questions. These were (22) I do not feel a need to study the course as it, and (23) Course and its content fit today’s demands. Reverse scale items presented in shaded rows. Table 5 shows that Arabic group perceived the course was more relevant to their field compared with English group. For instance, Arabic group believe course content fit today’s demand. The mean differences between Arabic group and English group are statistically significant. On the other hand, English group do not feel much need to study the course as it compared with Arabic group. The mean differences English group and Arabic group are statistically significant. There are enough evidences to support the claim that teaching in Arabic makes the course more relevant to the participants.

### **6.7 Teaching method**

This section was measuring pre-school teacher’s experience about how they feel in the class room between Arabic group and English group. Both Arabic and English language section participants were asked three questions. These were (24) I lose concentration during lecture, (25) class room interaction becomes very complicated, and (26) course content is easy to understand. Reverse scale items are presented in shaded rows. Table 6 shows that Arabic group enjoyed the course more in the class compared with English group. For instance, English group experienced difficulty in keeping concentration in the class and often found class room interaction were complicated compared with Arabic group. The mean differences between English group and Arabic group are statistically significant. On the other hand, Arabic group felt the course content easier to understand compared with English group. The mean difference Arabic group and English group is statistically significant. There are enough evidences to support the claim that teaching in Arabic makes the class room interaction more enjoyable to the participants.

### **6.8 Post test Analysis**

To validate this perception study, we have collected grades of assignment, midterm and final examination for Arabic group and English group of students. All the assessments were same except that the Arabic group appeared in Arabic language and English group appeared in English language. This section presents average performance in each of these three assessments between two groups of students. Later part of this section also presents the result of the correlation analysis between each of the assessment and its language of instruction. Table 7 shows that Arabic group has performed in midterm and final examination than that of English group. This difference is statistically significant. English group has performed slightly better than Arabic group in assignment. However this difference failed to meet  $\alpha=0.05$  which was the cutoff point for this research. Moreover, this exception can be explained as assignment were home based and there are more materials available in English compared with Arabic.

Table 8 shows that the relationship between language of instruction and performance in assessments. Performance in mid-term and final examinations have statistically significant relationship with the language (99% confidence level). The direction of relationship is negative. However, the assignment has no significant relationship with the language of instruction. So therefore, there are enough evidences to support the claim that there is a statistically significant correlation between the language of instruction and learning level, and teaching in Arabic helps the student learn more and perform better in professional courses than teaching in English.

### **6.9 Advantages and disadvantages of language of instruction**

The questionnaire had were two open ended questions asking to list advantages and disadvantages of learning this course in Arabic and English language. Participants who studied the course in the native language reported a number of advantages they see in their native language. For example, 38% stated that studying in Arabic leads to understanding the course content better. Similarly, 27% stated that studying in the native language results in easy communication between them and the instructor.

On the other hand, two advantages were reported by participants for studying the course in English: Learning an international language (70%), and availability of technology resources (30%). From the open-ended answers, it is clear that participants were favoring the native language over the non-native language for learning content and increasing their understanding of materials and interaction with the instructor. In spite of this fact, participants reported some disadvantages for both languages. Two disadvantages were reported for studying the course in the Arabic language. These were lack of technology resources (85%), and the use of traditional teaching methods (15%). Participants reported that studying in the English leads to a number of disadvantages. The most prevalent were difficulty understanding course content (66%), and limited students-teacher communication (14). In fact, these two disadvantages for the non-native language were reported as advantages for the native language as discussed above.

## **7. Concluding remarks**

This study has found that teaching in Arabic makes the course content was easier to understand, studying course content in Arabic helps participants to pursue and study more, and they can retain course content easily. While teaching in English result in the need for extra help to understand course content. This conclusion also confirms that the assessments were easier to approach while teaching in Arabic. On the other hand, teaching in a foreign language puts obstacles in understanding exam questions. Due to the native language, participant perceive the course was easier to learn and they can study the course without making a lot of effort. Teaching in foreign language may force participants to depend on memorizing rather than understanding, and create. The study has found enough evidences to support the claim that teaching in Arabic creates more positive attitude towards the course compared with teaching in English. This study also found that teaching in Arabic makes course content and references more appropriate, and it helped participants to communicate better in the class. Professional courses conducted in English without prior learning seek extra effort from the participants. Teaching in English also restricts participants from interacting with the course instructor and was feeling bored in the course. Teaching in native language makes easier to understand relevance of the course to the participants. This study has found that usages of native language make the learning environment enjoyable, interesting and interacting. The results of this study found that Arabic group has outperformed in midterm and final examination English group.

In conclusion, this study has found that Performance in mid-term and final examinations have statistically significant relationship with the language (99% confidence level). The direction of relationship is negative. So therefore, there are enough evidences to support the claim that there is a statistically significant correlation between the language of instruction and learning level, and teaching in Arabic helps the student learn more and perform better in professional courses than teaching in English. From the open-ended answers, it is clear that participants were favoring the native language over the non-native language for learning content and increasing their understanding of materials and interaction with the instructor. Previous studies also support these findings. According to VanPatten (1990), studying in a native language can save students time. He stated that studying in non-native language put a heavy burden on students who needed to relate new information taught in a non-native language to their prior knowledge learned in their native language. Therefore, teachers needed to be aware of students' individual differences and understand the needs of this population (Chamot & O'Mally, 1994).

To encourage students overcome English language problems in the university level and be more able to contribute to class discussion, researchers suggest the following: native language should be given priority as a language of instruction, particularly in non-scientific contexts.; students should be prepared in the use of English as an academic language well before admission to the university; the focus should be given on understanding the content rather than teaching a new language, when using non-native language as a language of instruction; translation of key terms and terminology could be provided to enhance students' understanding when using a non-native language; students should have strong proficiency in non-native language, when a non-native language is mandated to be the language of instruction; tests and tasks that are required to be completed in a non-native language should be tested to investigate the appropriateness of language to students' English proficiency; content is not compromised for language when conducting an ongoing assessment to the programs that use a non-native language.



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## Tables

Table 1: Course Content

Q. No		N	Mean	Std. Deviation	t	df	p
p1_a1	Arabic	181	4.15	1.04			
	English	228	3.41	1.41	5.92	407	0.000
p1_a2	Arabic	181	3.57	1.14			
	English	226	3.96	1.11	-3.48	405	0.001
p1_a3	Arabic	181	4.15	0.81			
	English	225	3.60	1.02	6.02	404	0.000
p1_a4	Arabic	180	3.71	0.98			
	English	225	2.75	1.15	8.93	403	0.000
p1_a5	Arabic	180	3.17	1.00			
	English	224	3.22	0.98	-0.47	402	0.640

Table 2: Assessment

Q. No		N	Mean	Std. Deviation	t	df	p
p1_a6	Arabic	181	3.71	0.93			
	English	225	3.31	1.08	3.96	404	0.000
p1_a7	Arabic	181	4.21	0.77			
	English	225	3.97	0.93	2.76	404	0.006
p1_a8	Arabic	181	3.04	1.14			
	English	221	3.86	1.22	-6.93	400	0.000

Table 3: Perceived Attitude

Q. No		N	Mean	Std. Deviation	t	df	p
p1_a9	Arabic	181	4.38	0.73			
	English	226	3.89	1.01	5.50	405	0.000
p1_a10	Arabic	180	3.00	1.23			
	English	224	2.41	1.17	4.95	402	0.000
p1_a11	Arabic	180	2.44	1.18			
	English	223	2.82	1.23	-3.11	401	0.002
p1_a12	Arabic	180	2.32	1.17			
	English	226	3.05	1.32	-5.87	404	0.000
p1_a13	Arabic	180	2.66	1.26			
	English	225	3.34	1.32	-5.27	403	0.000

Table 4: Language of Instruction

Q. No		N	Mean	Std. Deviation	t	df	p
p1_a14	Arabic	181	3.91	0.88			
	English	226	3.40	1.16	4.88	405	0.000
p1_a15	Arabic	181	2.65	1.33			
	English	224	3.81	1.29	-8.89	403	0.000
p1_a16	Arabic	181	4.06	0.97			
	English	224	3.30	1.21	6.89	403	0.000
p1_a17	Arabic	180	2.12	1.22			
	English	225	2.78	1.32	-5.13	403	0.000
p2_a18	Arabic	178	2.29	1.27			
	English	225	2.75	1.46	-3.28	401	0.001
p2_a19	Arabic	179	2.06	1.17			
	English	224	3.25	1.41	-9.05	401	0.000
p2_a20	Arabic	179	1.92	1.13			
	English	223	2.81	1.32	-7.112	400	0.000
p2_a21	Arabic	179	3.71	3.24			
	English	223	3.89	1.00	-7.76	400	0.438

**Table 5: Relevance**

Q. No		N	Mean	Std. Deviation	t	df	p
p1_a22	Arabic	177	1.90	1.09			
	English	225	2.20	1.17	-2.55	400	0.011
p1_a23	Arabic	177	4.33	0.86			
	English	224	4.00	1.04	3.48	399	0.001

**Table 6: Teaching Method**

Q. No		N	Mean	Std. Deviation	t	df	p
p1_a24	Arabic	177	2.24	1.11			
	English	225	2.98	1.31	-5.94	400	0.000
p1_a25	Arabic	178	2.27	1.10			
	English	225	3.18	1.17	-7.97	401	0.000
p1_a26	Arabic	177	3.79	1.07			
	English	225	3.07	1.38	5.73	400	0.000

**Table 7: Post-test Results**

Q. No		N	Mean	Std. Deviation	t	df	p
Assign	Arabic	184	49.42	5.18			
	English	223	50.57	7.00	-1.86	405	0.064
Midterm	Arabic	184	11.19	1.70			
	English	223	10.35	2.68	3.68	405	0.000
Final	Arabic	183	18.57	3.13			
	English	221	15.69	4.63	7.17	402	0.000

**Table 8: Assignment Correlations**

		Lang	assign	midterm	final
Lang	Pearson Correlation	1	.097	-.180**	-.337**
	Sig. (2-tailed)		.050	.000	.000
	N	603	408	408	405

\*\* . Correlation is significant at the 0.01 level (2-tailed).