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EDUCATION  
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EDUCATION AND  
LEARNING

# MEETING THE CHALLENGES OF TEACHING LISTENING SKILLS IN A LEBANESE PRIVATE SCHOOL: WHY CAN'T LISTENING PROGRAMS DELIVER AS EXPECTED?

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## **Abstract**

The ever-increasing spread of English as the language of global communication leads to ever-increasing demand for teaching it in non-English speaking countries. Lebanon, a small country located in the Middle East, is a good example. In Lebanese schools the need to communicate using English has created a significant need for efficient English language teaching methodologies, high quality resources, and well-educated and qualified teachers for the development of foreign language education. While there has been a sincere search into these aspects of English language teaching, listening skills have not received enough attention. This study tackles the challenges of teaching listening in a Lebanese private school. It has three major purposes. The first purpose is to find out how listening is taught. The second purpose is to explore the challenges of teaching listening in this school, and the third purpose is to offer suggestions for change. To collect data, an exploratory methodology was used based on two different sources: classroom observations and interviews with teachers and coordinators. Results imply that classroom observations and interviews indicated many negative practices in teaching listening.

## **Background**

Listening is defined as *"the ability to identify and understand what others are saying"* (Howatt & Dakin as cited in Kral, 1994, p.189). This ability also involves the ability to understand the accent, pronunciation, grammar and vocabulary (Yagang as cited in Kral, 1994). Nevertheless, Brown & Yule (1999) argue that listening which is also known as speech comprehension is not merely about hearing words but it is the ability to connect one sentence to what has been said before in order to achieve successful communication.

In fact, a look at the role of listening in second language learning (SLL) and second language teaching (SLT) showed that it did not receive priority and was for a long time regarded as a passive skill which learners acquire by practicing the other skills of speaking, reading and writing (Richards & Renandya, 2005). Later on, linguists started to reject this idea and thought of listening as being important not only to be taught and practiced but also to communicate in real life (Larsen-Freeman, 2000). Moreover, Richards & Renandya (2005) state that listening should be at the core of SLT by the implementation of developed listening courses in many English as a foreign language (EFL) programs. Larsen-Freeman makes the point that listening enables learners to communicate in the foreign language. As for Burke (2003), listening has to be a major component of EFL classrooms. For a point of fact, the ever-increasing spread of English as the language of global communication has led to ever-increasing demand for teaching it in non-English speaking countries as a foreign language. This has created a significant need for efficient English language teaching methodologies, high quality resources and well-educated and qualified teachers for the development of foreign language education. While everyone agrees that learning English is a need to survive in today's world, learning it well and meeting rigorous standards is a must. No matter what the method or program of instruction, teachers of English language learners need special skills and training to effectively accomplish this task. While this heated debate continues outside the classroom, teachers are responsible on the front line and responsible for the bottom line when it comes to equipping learners of English with the necessary skills and knowledge they will need to thrive in our changing world.

The shift in the status of listening from neglect to one of great importance is not new and had its roots in the 1960s when linguists argued for the essential role that listening comprehension can play in SLL. These linguists called for *"the need for the systematic development of listening comprehension not only as a foundation for speaking but also as a skill in its own right"* (Newmark & Diller as cited in Celce-Murcia, 1993, p.82). During the 1970s, there was a belief that learners of a second language and foreign language cannot speak a language if they are not able to

understand its spoken form. This belief affected the new teaching methods and among them is the “*Audio-lingual Method*” which started to incorporate listening as a skill in its own right along with the other skills (Belasco as cited in Celce-Murcia, 1993). One view expressed by Larsen-Freeman (2000) is that the “*Audio-lingual Method*” considers listening to be the most important of all skills and should be acquired before the other skills of speaking, reading and writing. This method is based on drills that students have to follow in order to communicate in the foreign language, and following this method learners need to listen to the teacher in order to perform the act. Later on, in the 1980s listening began to be taken more seriously after the “*Communicative Approach*” began to have a great effect on SLL and SLT. The “*Communicative Approach*” stresses the significance of language functions rather than focusing solely on grammar and vocabulary. According to Harmer (2001), this method is based on the idea that plentiful exposure to language in use is important for students’ knowledge and skills. Today listening is believed to be of primary importance. It is also an essential component of many language programs, and linguists believe that listening cannot only be acquired in the general process of language learning, but it can also be taught by planning activities that develop learners’ listening skills (Goh as cited in Johnson, 2005). Furthermore, Goh & Taib (2007) draw attention to the point that beginning and intermediate language learners who are unable to understand the spoken language can benefit from practicing some listening activities to help them improve their listening abilities.

Harmer (1991) describes how inside the classroom teachers can benefit from listening in many different ways. He explains that listening can be used either as a separate skill without the other skills or as an introduction to teach something else. As a separate skill, teachers should know how to develop their students’ listening skills through the use of activities which train students for effective functioning outside the classroom. In other words, teachers should be creative and come up with activities that students can relate to and which are not always based on “*Read Aloud*” which consists mainly of reading a passage to students then asking them to answer some comprehension questions based on their understanding of what they heard. On the other hand, he mentions that listening can be used as an introduction to a reading lesson where students listen to a passage that introduces them to the story they are going to read with the teacher. Consequently, it is of major importance to develop foreign language learners’ listening skills because they enable learners to communicate in the foreign language and help them learn the language unconsciously (Ur, 1996).

Improving the listening skills of intermediate school students is also of great importance in Lebanon. All Lebanese schools teach their students in a foreign language (French or English). This study was conducted in a private school in Lebanon. This school uses the English language as the first foreign language that students learn with Arabic being the native language for most of the students. English is also the medium of instruction for the scientific subjects (Mathematics, Biology, Chemistry and Physics) in all the grades. Therefore, students are required to have a good command in English language and all its skills, especially listening skills for many reasons. First, listening plays a major role in the process of English language learning and is important to students to be able to understand the teacher, to take notes in the classroom and to understand the scientific subjects taught in English. Students at this private school are taught listening, speaking, reading and writing skills along with grammar and vocabulary and then they are assessed at different stages. Many teachers from different grades always inform one another during their meetings that students cannot listen or concentrate for a long time during a listening activity and that the students’ attention span does not last for more than five minutes. Consequently, they listen only to the first part of the listening passage and lose control over the remaining part. Some teachers query the reasons behind this problem whether it lies in their teaching methods and practices or because it holds in its folds other variables. Furthermore, most of the students in cycle II and III of education feel anxious and unmotivated when they deal with a listening activity, especially when they know it is part of the whole language assessment. For a point of fact, the types of listening activities which are mainly “*Read Aloud*”, the methodology that they follow which is solely based on the same approach where the teacher’s voice is always dominant without any initiative from the part of students, the problems that they talk about in their meetings and their perceptions of students’ attitudes towards the listening activities show that a problem exists. Although listening is practiced every day indirectly and though it occupies part of the English language assessment, many points show that this area is not taught effectively and proportionally. With the use of traditional methods which are based on aural recognition or a listening passage followed by comprehension questions and with the fact that listening does not take that much time compared to other skills, there is a need to explore the challenges of teaching listening. Moreover, seldom are teachers and coordinators invited to share their experiences and their concerns in this regard despite the fact that it is critical to ascertain the perspectives of teachers who have a central role and such a large stake in these issues.

### Theories on the Process of Listening

Morley (as cited in Celce-Murcia, 1993) argues that listening is not a passive skill and requires active engagement from the part of the listener; this should be made explicit to learners of a foreign and second language. She also suggests that this can be made explicit by the use of tasks and activities where students are actively engaged. Following this strategy, she thinks that learners will understand listening is not just picked up in the general process of language learning, but it is only with work that learners can become good listeners. She adds that rejecting the old view is the responsibility of both teachers and school principals who have to realize the need to exert more effort in the listening context (Morley as cited in Celce-Murcia, 1993). Similarly, Brown & Yule (1999) emphasize the fact that listening needs active engagement from the part of the listener. They think of listening as being an active cognitive process that involves the construction of what they hear when they are able to identify the sounds of the language. Another way of viewing listening process is to follow the “*top-down*” and “*bottom-up*” approaches in listening (Harmer, 2001). In the “*top-down*”, language processing comes from an internal source. In other words, listeners rely on their background knowledge and their expectations in order to understand what is said (Morley as cited in Celce-Murcia, 1993). In the same way, Nunan (as cited in Richards & Renandya, 2002) discusses that in the “*top-down*”, listeners are interested in getting the general view: they are skimming. They pick out the main points and discard the irrelevant points or details. On the contrary, in the “*bottom-up*”, language processing comes from an external source which is the input itself. In order to understand what others are saying, listeners need to know how listening is evoked starting with the sounds of the language, the words, the grammatical relationship and the lexical meaning (Morley as cited in Celce-Murcia, 1993). Likewise, Nunan (as cited in Richards & Renandya, 2002) thinks that the “*bottom-up*” occurs when the listeners focus on every sound or word while listening until they are able to construct the whole. He also adds that both approaches occur separately, but interactively and that learners should be exposed to both processes and should be given opportunities to practice activities that depend on both.

### Listening in Practice

Harmer (2001) refers to the view that in the EFL context learners practice listening for different purposes. They listen to have the opportunity to hear voices other than the teacher’s or to acquire good speaking habits as a result of the spoken language they hear or to improve their speaking abilities and more specifically pronunciation. He also adds that in the classroom students listen most of the time to their teacher’s instructions in order to understand what he/she is saying and this is known as “*instrumental listening*”. Moreover, linguists argue that no matter what the purpose for listening is, they should be conscious that they are fulfilling one of the two language functions: language for interactional purposes and language for transactional purposes (Brown & Yule, 1999). In interactional language function, the purpose is to develop social relationships. On the other hand, transactional language function focuses on conveying factual information. Transactional language is message-oriented with emphasis on the content, language clarity and precision. Instructing, giving directions, describing and inquiring fall under this category (Brown & Yule, 1999). In the field of second and foreign language learning, experts direct learners towards transactional language use because there is premium focus on mastering the foreign or the second language more than being able to communicate in it. However, in some situations both views are involved because effective participation in the classroom needs interactional language to make sure students are participating with each other and with the teacher and transactional language to help students get new information and acquire new skills.

Lewis & Hill (2002) think that learners employ a number of skills when practicing listening. These are:

- 1- Predicting and guessing
- 2- Extracting specific information
- 3- Getting the general picture
- 4- Extracting detailed information
- 5- Inferring opinion and attitude
- 6- Identifying the topic
- 7- Deducing meaning from context

According to Lewis & Hill (2002) in the EFL context, learners are more or less aware of these skills but sometimes while listening to a foreign they may face difficulties in trying to use them. They state that it is the job of the teacher to develop the students’ listening skills by looking for activities that give them enough practice in all the skills and to confront these difficulties by offering help whenever students need.



### **Importance of Listening in the Teaching Context**

Larsen-Freeman (2000) asserts that all language skills were affected by the changes that started during the 1970s and which affected the way languages were taught with a focus on the receptive skills which had been regarded as being passive skills and the idea that listening comprehension is essential for successful communication among individuals. Following this, the new instructional methods started to give great importance to listening, and one of the methods that give great importance to listening is the *"Audio-lingual Method"* which drills students in the use of grammatical sentence patterns so they will be able to use the target language communicatively. In the *"Audio-lingual Method"*, listening is of primary importance and the natural order of skills is: listening, speaking, reading and writing. Usually, the oral skills are given more attention (Larsen-Freeman, 2000).

A look at the role of listening in the teaching context shows that during the last years listening started to be considered an essential skill on which the other skills depend. Richards & Renandya (2002) state that during the last twenty years listening has begun to be taken seriously where active interest in the role of listening comprehension in SLL and FLL has taken place. This was clear with the emergence of new theories on the nature of language comprehension and by including listening classes in many EFL programs (Richards & Renandya, 2002). Burke (2003) supports this view that in the last years listening started to be considered an important component of many EFL programs. In the same fashion, Goh & Taib (2006) mention that teachers should come to the realization that listening can be a stressful activity for language learners. Adding to this, Ur (1996) argues that teachers begin to think that listening helps students learn language subconsciously and should not be treated trivially in second and foreign language curriculum and that listening comprehension practice in the classroom must enable students know how to function in real-life listening.

As listening should be an important component of many EFL contexts, Harmer (1998) thinks that teachers should find out certain rules for conducting a listening activity. He argues that in order to achieve successful listening activity some principles should be taken into consideration. First, the teacher has to make sure that all the students are able to listen to the material. Second, the teacher and the students should be prepared for the listening activity. Third, the teacher should give students the chance to listen to the listening text more than one time. Other points that teachers should consider is the fact that different listening stages demand different tasks. Teachers also have to encourage students to respond to the content of the listening texts and to exploit them to the full.

### **Necessary Elements for a Successful Listening Activity**

As stated by Ur (1996), listening activities should be motivating and interesting. In the same regard, Harmer (2001) thinks that there are three elements which should be present in a language classroom in order to achieve a successful language teaching and for the students to benefit to a great extent from the learning experience. These three elements are: Engage, Study and Activate.

- 1- In the first element which is “*Engage*”, students need to get involved inside the classroom, and this can only be achieved with the help of the teacher who should arouse their interest and emotions with the use of activities that engage students such as games and stimulating pictures (Harmer, 2001). In a like manner Richards & Renandya (2005) argue that teachers should engage students by asking them to answer some questions or even to think about the topic in hand before they start. Teachers should also try to personalize the topic of discussion so that learners can bring themselves to it. The more students are engaged, the more they learn.
- 2- In this element which is “*study*”, students can study a particular evidence of the language to learn its grammar and that with the use of study activities inside the classroom, the teacher and the learners achieve successful language learning (Harmer, 2001).
- 3- In this element which is “*Activate*”, Harmer (2001) states that there is focus on how students can freely communicate using a particular language so that they have the opportunity to practice language in its real form because if students have not the chance to activate their knowledge about the language they will face some problems in world communication.

In addition, Nunan (2001) believes that listening should be accompanied by some learner-centered activities through which students can demonstrate their comprehension and experience the pleasure of success. He also adds that activities are also important in testing listening comprehension because, through the activities, teachers will not be testing something vague; rather they will be testing the results of listening (Nunan, 2001). In the same regard, Harmer (1991) argues that teachers should make sure that the tasks or activities are realistic, informative and motivating and that they cannot expect their students to respond or to interact unless they make sure that the students’ desire to learn has been awakened. He mentions that teachers of a second language should recognize the importance of giving their students activities that reflect real life which include authentic texts. He draws the attention to the fact that familiarity of the topic is an essential characteristic of listening activities because it is very important that students practice activities that deal with topics they can relate to. The more students are familiar with the topic at hand the more the listening activity is interesting to them.

### **Teacher’s and students’ Roles in Listening Tasks and Activities**

Lewis & Hill (2002) discuss that teachers have a great role in conducting listening activities and they add new responsibilities for them which can be summarized as follows:

- 1- The teacher has to do a general introduction by telling students what the task or activity is about.
- 2- The teacher has to tell students about the structure of what they are going to hear so that they get the sequence of ideas in the text.
- 3- The teacher has to review with students some words that will be used in the text.

To support their view, Lewis & Hill (2002) point out that teachers are responsible for what happens in the “*pre-listening*” stage where teachers should make sure that students know exactly what is required of them before the beginning of the listening activity and that they should be given guidance on what they are going to hear. This can be done by giving them two or more questions before the listening stage takes place so they can have an idea about the sequence of events in the passage or by refreshing their minds with already known vocabulary, and this depends on the class, the level of difficulty of the material and even the level of the students. On the other hand, Harmer (1998) stresses that students also have a specific role to accomplish. He says that students are usually expected to use what they know in order to perform a task and that they should respond to the listening materials and this can be achieved by asking students to give their opinions, give the general idea of a passage, summarize or paraphrase what they heard.

### **Frequent Problems in Listening Tasks and Activities**

In trying to explore difficulties that learners of a foreign or second language face while practicing a listening activity, specialists in this field argue that students encounter some problems. Chang & Read (2006) state that listening

comprehension can be a difficult skill for foreign language learners who may encounter some difficulties in trying to understand what speakers of the target language are saying. These problems are:

- 1- Lack of control over the speed at which speakers speak
- 2- The listener's limited vocabulary
- 3- Failure to recognize the "signals"
- 4- Inability to concentrate

Likewise, Ur (1996) also deals with problems that students face and says that they can not follow the tape from the first exposure and always ask the teacher to repeat the listening passage because single exposure is not enough. Kral (1994) discusses other problems that learners may face which are:

- 1- Message is not clear enough
- 2- Content is not well organized
- 3- Inability to recognize linguistic features
- 4- Presence of colloquial words and slangs

### **Research Questions**

There are three major purposes for this study. First, it aims to find out how listening is taught in a Lebanese private school. The second purpose is to explore the challenges of teaching listening skills, and the third purpose is to offer suggestions for change in the types of listening activities used in the classrooms and the methodology that teachers follow in practicing these activities. This research paper will address two major questions:

- 1- How listening is taught in a Lebanese private school?
- 2- What are the challenges of teaching listening in a Lebanese private school?

### **Methods**

#### **Participants**

This study was conducted within a secondary private school. Located in North Lebanon, this school is an English-medium school which includes around 4000 students. The participants for this study consisted of three different categories: learners, teachers and coordinators. They are all members of the same school. Learners or students were only observed in the classrooms while they were doing the listening activities. Teachers played two major roles in the study: first they were observed in their classrooms during a listening activity and then they were interviewed individually. As for the coordinators, each was also subjected to the same interview.

The first category of participants consisted of students of G4, G6, and G8. There was a reason for choosing students from these three grades only. First, G4 is the first grade in cycle II and is considered a transition in students' life. Second, G6 is the last grade in cycle II and consequently it is a preparation for students to the next cycle. As for G8, it belongs to cycle III and its curriculum scope is very near to that of G9. Moreover, it is a countdown to G9. The number of students in each class was not the same while some classes had 25 students, others had only 19. The students are nine to fourteen years of age and are learning English as a first foreign language. Their class meets for an average of one to two hours per day, five days a week. These classes are taught by different teachers.

The second category is mainly concerned with six teachers who were observed and interviewed. These teachers teach different grades in the school and they represent the two cycles: II and III of elementary and intermediate education respectively. Six teachers and coordinators were interviewed and three of them were also observed in the classroom.

The third category consisted of coordinators. The first is responsible of cycle II of elementary education which includes G4, G5 and G6 whereas the second coordinator is responsible of cycle III of intermediate education which includes G7, G8 and G9.

#### **Instruments**

In trying to answer the research questions, data was collected from two different sources: classroom observations and interviews with teachers and coordinators.

The first way of collecting data was through classroom observations. In fact, I intended to observe how listening activities are practiced in different grades. Students in these grades are learning English as a first foreign language and it is the medium of instruction for all scientific subjects. Each class in each grade meets for an average of 8 hours per week. These students are taught all the skills along with grammar, spelling and vocabulary. During the

observation, the focus was on three different points: the topic of the listening activity, the type of the listening activity and the strategies that the teacher followed in practicing the activity.

The second way of collecting data was through the interviews with teachers and coordinators. To provide the study with corroborative data, it was necessary to sit with the interviewees once during or after the data collection. Six teachers and coordinators were interviewed and the interviews were recorded. An interview schedule was planned where teachers and coordinators were asked 19 questions. Some of the questions had to be answered in a very objective way. Thus teachers have to state factual information about listening in their school and others are very subjective. The questions were divided into four types according to their themes:

- 1- Listening schedule
- 2- Listening activities
- 3- Listening problems
- 4- Assessment of listening

The interviews are semi-structured. They are made up of predetermined questions where the interviewer can change the order of the questions according to the situation. Not only the order can be changed but also the exact wording. In this way, the interviewer is given freedom where he/she can add or delete some questions. In fact, teachers were chosen upon availability and in this way, one teacher from each grade was interviewed.

## **Data Analysis**

Data was analyzed on two scales. The first part of the analysis was concerned with classroom observations. These observations dealt with three themes. First, it showed the topics of the listening passages that the students were working with and whether they were familiar with them or not. Second, it dealt with the types of the listening activities that students were practicing. Third, it also dealt with the methodology that the teacher was using during the listening activity by describing the way each activity was done.

The second analysis was devoted to the analysis of the interviews with teachers and coordinators. A thematic analysis was used where the interviews were analyzed according to four different parts and each part is divided into different themes. The first part discussed the listening schedule and this included four themes: the importance of listening, the way listening is taught, the amount of time devoted for listening in the course curriculum and the purposes of teaching listening. The second part dealt with listening activities and it included four themes: a description of a typical listening activity, the resources for listening activities, the types of listening activities and the materials used in listening activities. The third part included one theme and is concerned with problems during listening activities. The last part included two themes and dealt with the assessment of listening activities, the teachers' perceptions of students' attitudes towards listening activities.

The first source of collecting data was the observations in the classrooms. The observations were done at the beginning of data collection. The analysis of the observations was done according to different themes: the topics and the types of listening activities done during the observations and the strategies that the teacher followed in each activity.

The second way of collecting data consisted mainly of the interviews with teachers and coordinators which were done during and after data collection. For this purpose, an interview schedule of nineteen questions was prepared and six teachers and coordinators from different grades were interviewed. Then the interviews were grouped and analyzed according to different themes.

## **Results of the Study**

### **Analysis of the Observations**

The results of the observations in G4, G6 and G8 were analyzed according to three different themes: topics of the listening activities, types of the listening activities and listening strategies. These themes were chosen for many reasons. First, it is important to analyze the topics of the listening activities in order to find whether students are dealing with topics they know about because this may affect either positively or negatively their perception of the listening activities. Second, the types of listening activities show whether teachers are offering students a variety of listening activities or not because it is very important that students practice activities of different types. Third, the analysis of the listening strategies reveals how teachers practice the activities or the methodology they use and whether they still follow traditional methods or not. The analysis of the first theme showed that during the observations, students dealt with different topics. In G4 the listening passage talked about "having a pet at home". In G5 the listening passage was about "Customs" and why people keep them and how they influence their lives. As for G6, the teacher discussed with students that "people of different races and religions have to come together". This shows that in both classes the topics might be interesting to students because they represent something they face in their country, Lebanon. Students should know that many Lebanese people have pets at home, have their own customs which they like to preserve and should also know that Lebanese people who belong to different religions should be united. All this makes these topics interesting to students. As for the second theme, all the observations were based on listening to a passage that the teacher read aloud for some minutes then she read it again to give students a chance to listen to what they missed in the first reading. However, the teachers used two different models to practice the activities. The first model was when she gave students an idea of the passage beforehand then she followed a "Question-Oriented Response Model" where she asked students to answer some comprehension questions to check their understanding. The second strategy was when she let the students predict what the poem will be about then she used a "Task-Oriented response Model" where she gave students a task to accomplish by asking them to look for the "sound devices" and "figurative language". Whether she followed the first or the second strategy, the teacher followed a traditional way of practicing listening where the teacher talks most of the time and students listen. The teacher's voice is always dominant and students are allowed to speak only when the teacher asks. This is a teacher-centered approach where the teacher plays the major role and students are given the minor one. As for the third theme regarding the listening strategies, the teachers in some observations think that different listening stages demand different listening tasks. To this point, in the "pre-listening stage" she asked students to

brainstorm things related to “pets” and “customs” by asking them to answer some questions. By this, the teacher wanted to build these two concepts in the students’ minds. Then, she discussed with students the title of the listening passage and gave a short summary of the passage to make sure that all students know what it is about. In the “while-listening stage”, the teacher read the passage more than one time and did not allow students to ask any questions. Finally, in the “post-listening stage” she wrote a couple of questions on the board and asked students to answer them individually. Then, they discussed the answers altogether. The other strategy that teachers used was when they did not set any task in the “pre-listening stage”. She wrote the title of the poem on the board without any comment to make students think of the content of the poem for few seconds. Then in the “while-listening stage” she read the poem for the first time and asked them to think of the message behind the poem before she summarized the poem for them. Then, after she read the poem for the second time, she set a post-listening task where she asked students to look for “sound devices” and “figurative language” in the poem. Finally, they discussed the answers together. Though the teacher used two different techniques but in both observations the teachers’ voices were always dominant with little time given for the students; the teachers asks and students answer. The teacher followed a teacher-centered approach which most of the students do not prefer. Students want to be given freedom to communicate with the teacher and with each other.

### **Analysis of the Interviews**

The results of the interviews were analyzed according to different themes (already mentioned). These themes were chosen because they show in details how listening is taught and what the challenges of teaching listening are.

#### *Theme 1: Importance and Purposes for teaching listening*

In answering the question on whether teachers and coordinators think that listening is as important as the other skills, the majority of teachers admitted the importance of listening in the teaching context for many reasons. First, listening is an integral part of the communication process. Second, listening enhances and helps in acquiring the other skills of speaking, reading and writing. It is a skill on which all the language aspects depend. In this regard, students can not speak the language if they can not understand its spoken form. As for reading, students learn how to pronounce the words after they hear them and the same for writing because students can not take notes of what they hear if they do not understand the meaning. Listening can also be used to teach grammar and vocabulary. Third, teachers think that listening is important because every story in the course book has a listening passage that students listen to before they read the story and because the coordinators stress on teachers to practice the listening activities presented in the book. Fourth, listening is taught to build a culture based on understanding and listening to others. Fifth, it teaches students to expect, predict, make inferences and analyze. Finally, teachers believe that listening is important because it is marked and it is part of the English language assessment and should not be underestimated. However, few of them informed the interviewer that listening is not given the necessary importance as it should and this is for two main reasons. First, students have to deal with the other skills and this is why teachers can not spend too much time in practicing listening. Second, teachers still think that listening is acquired through the other skills and not directly taught. This prevents them from giving enough practice for listening and reveals some of the challenges of teaching listening.

#### *Theme 2: The Way listening is taught*

When asked about the way listening is taught, most teachers and coordinators said that listening is both directly taught and acquired in the general process of language learning. Yet, one of them said that listening is acquired with the other skills and is not directly taught. This shows that the majority rejected the old view that listening can not be taught and that it is acquired through the other skills. In fact, rejecting the old view that listening is only acquired through the other skills is a positive point.

#### *Theme 3: Time devoted for teaching listening*

In response to the amount of time devoted for listening in the course curriculum, the majority of teachers gave contradictory answers. There was no clear cut response regarding how much time exactly teachers spend on practicing listening. They did not separate between indirect listening which occurs when students listen to teachers every second in the classroom and direct listening which occurs when listening is directly taught and practiced through the use of activities. As for how much time a listening activity usually takes, most of them answered that a normal listening activity takes an average of 20 minutes.

#### *Theme 4: Description of a typical listening activity*

The majority of teachers and coordinators argued that a typical listening activity is done following these steps. In the first place, the teacher either builds the concept in students’ minds by asking them to brainstorm things related to

the topic and by asking them to answer some questions orally or by giving a short summary of the listening texts. Second, the teacher reads the listening text for the first time and allows students to look at the questions they are going to answer. Third, the teacher reads the listening text for the second time or third if needed and gives students time to answer the questions. The answers prove that all teachers depend on the "Read aloud" as a typical listening activity. This is a traditional way of practicing listening. There is no originality in the way the listening activities are done. In fact, teachers do not break the routine by using some motivating listening activities which arouse their interest. This is one of the negative practices in teaching listening.

#### *Theme 5: Materials and resources for listening activities*

In asking teachers and coordinators on the resources they use for listening activities all of them argued that they use some of the listening activities in the teacher's book which are mainly 'Read Aloud' but they skip the ones they deal with a topic that students might not understand because the book is not designed for foreign language learners. Consequently, they usually work together and look for extra activities whether from another book or from the Internet or from some articles in magazines. This shows that they do not stick to the listening activities in the textbook and try to look for other resources, which is a positive point. As for the materials they use, the majority said that they use the CD player when it is available; however, they also said they do not always have the listening passages on a CD and this is why they are obliged to use their own voice to read the passage. This shows that students do not always have access to different accents; they are most of the time exposed to the teacher's accent and this creates a problem because students need to listen to different accents and this is another challenge of teaching listening.

#### *Theme 6: Types of listening activities*

Teachers and coordinators pointed out that they use different types of listening activities. First, they ask students to listen to a passage then to answer short questions with "what, where, when, who and how" or True/False questions or yes/No questions or Multiple Choice questions. They also ask students to listen to a passage then to summarize it or paraphrase it or draw conclusion or predict what is going to happen next. They also ask students to listen to a passage then to give a title or to give the main idea of the passage or to give the meaning of some words or to put the events in the correct order or to find out the purpose of the author. Other types of listening activities are listening to a passage then practicing the other skills of reading and writing, listening to a passage then researching about the topic and listening to a passage and doing a role play. It is clear that teachers and coordinators are trying very hard to vary the activities but they always follow the same approach where the teacher asks and students answer. In other words, the teacher's voice is always overwhelming the students' voice and there is no initiative from the students. It is a teacher-centered classroom. Teachers do not vary their approach by letting students choose or create the listening materials by themselves.

#### *Theme 7: Problems in listening activities*

Teachers and coordinators argued that they face some problems in practicing listening activities. First, they suffer from students' inability to concentrate for a long time and this results in losing control over the listening text. Students' attention span do not last for more than three minutes and consequently students can not follow what the teacher is saying and they will not be able to understand the content of the listening text. Another problem that they face is students' lack of interest in the listening activity because they can not listen for a long period of time. Teachers stated that students do not feel interested in the listening activities because they do not listen to the whole listening text. Moreover, they always complain from students' interruptions while listening to the text. Students always stop the teachers to ask them either to explain some words or to clarify things. Another obstacle that teachers and coordinators face is students' lack of training in the required skills. Students are not trained in how to approach a listening activity. Finally, they talked about the lack of resources and materials. They are in need for special resources for new and motivating types of listening activities. The answers showed that they face many problems and are in need to overcome these obstacles. They should train students in how to listen and how to approach a listening activity. They also ask for new resources and extra materials that enable them to look for new types of listening activities.

#### *Theme 8: Assessment of Listening*

In answering how listening is assessed and what percentage listening has in the course assessment; all of them argued that listening activities are not graded and are assessed informally by the teacher who asks some questions to assess listening comprehension. Concerning the percentage given to the listening skill in the course curriculum, the majority of teachers and coordinators said that listening occupies 10% of the whole English language assessment whereas the other skills such as reading, writing or grammar skills are not given less than 15% each. It is clear from

this that the listening skill is given a low percentage compared to the other skills and this is another challenge of teaching listening.

### **Conclusion**

Results of the study showed a great deal on how listening is taught and revealed many challenges of teaching listening. On the one hand, the analysis of the classroom observations indicated some negative points in the way listening is taught and practiced. In the first and second observations, the teachers followed a Question-Oriented Model. Yet in the third observation, she followed a Task-Oriented Model. However, in these three classes students depend on the "Read Aloud", which is considered a traditional way of teaching listening which most probably does not stimulate students' interest. The teacher did not try to break the routine by offering students activities that depend on visual materials such as stimulating pictures or audio materials such as CD players or interactive videos. This is one of the negative points in teaching listening. The techniques that the teachers used showed also some other challenges in teaching listening. Though the teachers varied the types of the listening activities and followed two different techniques, the teachers used the same approach. It is a teacher-centered classroom where the teacher asks and students answer. There is no balance between the teacher talk and student talk during the activity. The teacher's voice is always dominant. Moreover, students were only communicating with the teacher whether when they were answering some of her questions or when they were looking for "sound devices" or "figurative language" but they were not allowed to communicate or interact with each. With this, the teacher was following only one language function which is "Transactional Language Use" where there is emphasis on the content, language clarity and precision disregarding "Interactional Language Use" where the focus is on giving students the chance to communicate with one another. I think that the teachers fell behind actively engaging students' interests by bringing some stimulating pictures or by starting the listening activities with a game or a listening oriented discussion before she started focusing on a particular evidence of the language. Moreover, she did not give students the opportunity to discuss the topic with each other. Following this strategy, she missed the "Engage" and the "Activate" elements which are two necessary elements for a successful listening activity. Furthermore, she should have rendered the activity more authentic by relating it to students' life and by asking them to give examples of some of the Lebanese customs. She should have explained some unfamiliar words before she started reading instead of waiting for students to interrupt her and ask her about their meanings. Finally, she should have offered students the chance to work or to help one another by encouraging pair or group work.

Moreover, the teacher did not use any materials to make students listen to the listening text and students did not have access to different accents. With this, students will not be trained to listen to different accents and consequently will not be able to understand people of different accents.

The analysis of the interviews sheds light on many challenges of teaching listening. Teachers and coordinators always complain that they have many themes to cover and that one of the challenges of teaching listening is the fact that the curriculum requires students to learn about the four skills along with grammar and vocabulary; however, teachers can not devote most of the time to teach and practice the listening skill because they have to look for the other skills. Listening is not given designated time to be taught. They need to find time for teaching and practicing listening because it is an important skill on its own right and should not be treated trivially. In the interviews, teachers and coordinators argued that they only practice "Intensive listening" or "focused listening" which is done for a special purpose such as answering some questions or extracting specific information. They did not mention anything on "Extensive listening" which most of the students enjoy because it is done for general language improvement. As for the materials the teachers use, it was clear that they do not use technology. Nowadays everything depends on technology and teachers should implement technological means in English language teaching such as the use of computers, overhead projectors and DVD players.

Finally the interviews showed that listening activities are not graded and that only listening quizzes and tests are marked. Not to forget that listening is given a low percentage in the English language assessment compared to the other skills. Moreover, teachers and coordinators think that students are not given enough training in the required skills before the activity starts and are not trained to listen to other people in life and this is probably why they can not listen and concentrate for a long time during listening activities and this results in losing control over the listening passage and consequently students can not understand the passage and get bored.



## REFERENCES

- Bachman, L., & Palmer, A. (1996). *Language testing in practice*. Oxford: Oxford University Press.
- Beatty, K. (2003). *Teaching and researching computer-assisted language learning*. London: Longman.
- Brown, G., & Yule, G. (1999). *Teaching the spoken language: An approach based on the analysis of conversational English*. Cambridge: Cambridge University Press.
- Burke, J. (2003). *The English teacher's companion: A complete guide to classroom, curriculum, and the profession*. (2<sup>nd</sup> ed). Portsmouth: Heinemann.
- Celce-Murcia, M. (Ed). *Teaching English as a second or foreign language*. (2<sup>nd</sup> ed). Boston: Heinle & Heinle.
- Chang, A., & Read, J. (2006). *The effects of listening support on the listening performance of EFL learners*. TESOL Quarterly, (40) 2, 375-397.
- Chapelle, C. (2001). *Computer applications in second language acquisition: Foundations for teaching, testing, and research*. Cambridge: Cambridge University Press.
- Goh, C., & Taib, Y. (2006). *Metacognitive instruction in listening for young learners*. ELT Journal, (60) 3, 222-223.
- Harmer, J. (1991). *The practice of English language teaching*. London: Longman.
- Harmer, J. (1998). *How to teach English: An introduction to the practice of English language teaching*. London: Longman.
- Harmer, J. (2001). *The practice of English language teaching*. (3<sup>rd</sup> ed). London: Longman.
- Hughes, A. (2005). *Testing for language teachers*. (2<sup>nd</sup> ed). Cambridge: Cambridge University Press.
- Johnson, K. (Ed). (2005). *Expertise in second language learning and teaching*. New York: Palgrave Macmillan.
- Kral, T. (Ed). (1994). *Teacher development: Matching the right ones*. Washington:USIA.
- Larsen-Freeman, D. (2000). *Techniques and principles in language teaching*. (2<sup>nd</sup> ed). Oxford: Oxford University Press.
- Lewis, M., & Hill, J. (2002). *Practical techniques for language teaching*. Boston: Thomson.
- Nunan, D. (2001). *Language teaching methodology: A textbook for teachers*. Sydney: Phoenix.
- Richards, J. C., & Renandya, W. A. (Eds). (2002). *Methodology in language teaching: An anthology of current practice*. Cambridge: Cambridge University Press.
- Rost, M. (1990). *Listening in language learning*. London: Longman.
- Underwood, M. (1989). *Teaching listening*. Kenworthy, J. & Rost, M. (Eds). London: Longman.
- Ur, P. (1996). *A course in language teaching: Practice and theory*. Cambridge: Cambridge University Press.

# ATTITUDES AND EXPECTATIONS OF LANGUAGE LEARNERS THAT LEAD INTO CURRICULUM

PELIN HAMURABI SÖZEN

## ABSTRACT

**Objectives:** The vast majority of Medical schools in the Arab World use English for teaching students whose first language is Arabic. This has created a language barrier especially for those who have not acquired or frequently practiced this foreign language during the first few years of their education. We aimed to describe the value of employing social media for introducing pharmacology education for Arab medical students in their native language.

**Methods:** Since March 2016, we have created a channel on YouTube called "Simplified Pharmacology". The channel is fed weekly with short educational pharmacology videos (up to 15-minute long). The videos feature PowerPoint slides that cover different basic and clinical pharmacology subjects at a glance. The slides' written instructions are prepared by translating the information from English to Arabic. Thereafter, the slides are converted to a video format then sound is recorded on them as explanation. The text and sound included in the videos are prepared in Classical Arabic so that all Arabic-speaking medical students can understand.

**Results:** Over seven months, the channel has attracted 304 subscribers. The number of videos that have been uploaded to the channel has reached 29 videos. The total number of views made by the channel's subscribers and visitors has reached 10,397 views while the total watching time has attained 30,135 minutes. The number of views increased from an average of 114 views in March 2016 to an average of 3850 in October 2016. Likewise, the total watching time increased from 206 minutes in March 2016 to 10,389 minutes in October 2016. Analysis of the geography of channel visits showed that the origin of views was mainly from Arab countries. The top 10 countries based on the number of views were as follows: Bahrain (18%), Iraq (16%), Saudi Arabia (12%), Egypt (10%), Algeria (8.2%), Morocco (7.4%), Palestine (2.7%), Yemen (2.7%), Jordan (2.2%) and Turkey (2.2%).

**Conclusions:** We reported the power of employing social media to introduce pharmacology education to medical students in their native language. Based on our observation, we advocate utilizing this approach to support medical education in countries where students learn medicine in a language other than their original language.

**Keywords:** Native Language, Pharmacology Education, Social media

# THE ROLE OF FORMATIVE ASSESSMENT IN THE PROCESS OF TEACHING AND LEARNING

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## Abstract

Many studies consider assessment an integral part of teaching that fosters learning and increases motivation. There is a variety of types, strategies and techniques of assessment that interrelate to each other and are applied recursively to help students' learning. There is a tendency among schools to focus on summative assessments, paying less attention to skills and competences. The purpose of this paper is to show how formative assessment impacts the process of teaching and learning as well as the level of students' achievement. To analyze the assessment approaches used in schools findings from twenty five full reports drawn from reports undertaken by State Inspectorate of Education in Albania in primary and low-secondary schools were analyzed and discussed. The sample includes schools from all the regions in the country. The paper begins with an analysis of types of assessment, focusing on the formative approach. The second part comprises key analyses on assessment practices carried out in primary and low-secondary schools in the Albanian system of education.

Findings show that little attention is given to strategies and techniques of formative assessment, and this has lead to barriers in learning. As a consequence learners' needs are not diagnosed, addressed and appropriate strategies and techniques according to students' level, interests and needs are not adjusted. Additionally, interviews with two focus groups of teachers from a low- secondary school were carried out upon the assessment approaches they use in the process of teaching to help make a deeper analysis upon the practices they follow.

This paper will serve teachers and professionals of education to review their teaching approaches by integrating assessment as a mechanism that allows them to monitor the process of teaching and helps students to make progress in their learning.

**Keywords:** Diagnostic assessment; Formative assessment; Summative assessment; strategies and techniques of assessment; students' achievements.

## 1. Introduction

Researchers and educators have been putting emphasis on assessment, taking into consideration the strong correlation it exists between assessment and the process of teaching and learning. On our perception, assessment is a tool that feeds learning. One of the educational main goals is to make students advance cognitively by gaining life-long learning mechanisms and competences. To achieve that, educators carefully monitor students' progress and select teaching methods, that enable best opportunities for students to learn. Studies have shown that application of formative assessment helps raising levels of student achievement, as well as closing gaps of outcome inequity between students. On the other hand, the introduction of self-assessment, a strategy that develops self-control on the acquisition process, has proven to be a step forward in creating independent learners. This overview shows the importance of assessment in fostering learning, influencing students' attainments and contributing in providing greater chances to skills' building. Furthermore, the paper discusses and analyzes barriers teachers face in integrating formative assessment into the process of teaching and how these difficulties impact students' learning. More specifically, first part of the paper emphasizes the significance of assessment in the process of learning and highlights features of different types of assessment as well as their cohabitation and interdependence within the learning process. Second part offers information about various assessment techniques and their frequency of application, teachers use in their practices. Last part suggests ways of enhancing assessment practices, providing specific individualized feedback for students and differentiated instruction accordingly.

## 2. Background

National reports carried out by the Agency of the Evaluation in the country rank among factors of students' low attainments, the lack of assessment integration into teaching as a tool that informs and leads instruction. In Albanian system of education we assess students' knowledge, skills' building and competences through various ways. We assess students through a range of assessment tools such as : oral answers, written work and projects. Grading is provided starting from the lowest grade, a minimal 4 (failing) and advancing to a maximal 10 (excelling). Regarding

assessment of oral answers, teachers are required to keep notes and continuous data on students' performance. Students are assessed through written tests, while their competences are assessed through project performance. In all these types of assessment, students are supposed to have not less than three grades. The summative assessment is a summary of students' performance in these processes as well as the quality of products achieved. Teachers are required to integrate various forms of assessment and specify criteria of assessment into their plans. They are also required to track students' individual progress and use this information to adjust teaching.

### 3. Methodology

Data regarding the assessment practices implemented by teachers were obtained from 25 full reports of low-secondary schools. The sample includes schools from all the regions of the country. School inspections were carried out, based on random selection of schools making the population representative and findings to be generalized. This paper provides findings on assessment approaches used in classes of primary and low secondary schools, retrieved from reports undertaken by State Inspectorate of Education in Albania. Findings were reviewed and analyzed under the category of indicators used in the field of students' assessment during external school evaluations. Reports were read carefully and positive practices and main barriers were identified, classified, calculated and represented on percentages. A qualitative analysis was carried out summarizing the findings accordingly and coming up with conclusions. Additionally, interviews with two focus groups of teachers from a low-secondary school were carried out upon the assessment approaches they use in the process of teaching to help make a deeper analysis upon the practices they follow.

The indicators analysed in these paper were:

- *Teachers inform and share with students lessons' intentions and objectives*
- *Teachers plan differentiated objectives and activities for students with learning difficulties*
- *Teachers provide learning opportunities for all students according to their level and needs*
- *Teachers closely monitor students learning and provide individualized feedback*
- *Teachers use questioning-answering technique to gather evidence of learning*
- *Teachers incorporate assessment strategies into their lesson plans*
- *Teachers gather evidence of students learning through homework*
- *Teachers base their summative assessment on continuous data of concept consolidation.*
- *Teachers base students' assessment on explicit, clear criteria*
- *Teachers base their grading on predefined criteria*
- *Teachers help and foster students to learn by identifying strengths and areas for improvement*
- *Teachers design tests that follow the principle of validity and objectivity*

### 4. Literature review

#### 4.1 Importance of assessment procedures in the process of learning

There is a misconception of terminology among teachers regarding assessment and evaluation. Many teachers do not discriminate these concepts. Assessment is linked to monitoring and judgments of student performance, while evaluation refers to judgements of curricula or school effectiveness. Assessment is a process and as such it goes through stages. It happens:

- *before instruction starts*, and it serves to diagnose students' level, identify their needs and appoint their level;
- *during instruction* aiming at identifying and simultaneously adjusting instruction according to students' needs;
- *after instruction*, during each student's efforts and potential are classified under a certain category.

Many researchers consider formative assessment an integral and organic part of the instruction process, since it plays a major role, focusing on students' identification of needs and adjustment of content, strategies and techniques that fit with individualized students' learning style, level of performance and interest. Formative assessment, or *assessment for learning*, is a strategy that keeps informing the teacher upon the degree and the quality of acquisition and levels of skill consolidation. Without being clear on how students are learning, teachers can't take appropriate decisions on adapting teaching and prioritizing areas for improvement they need to reconsider. The success of teaching depends on a very close monitoring of learning, associated with adjustments of methods that support learning. Formative assessment needs to be applied on continual basis, in order to enable teachers to remediate students work. The perspective is emphasized by researchers who support the idea that

tracking students' progress toward objective learning goals is very effective and leads to progress. (Cameron and Pierce, 1994; Kluger and DeNisi, 1996; Heckhausen, 1989; and Rheinberg and Krug, 1999).

Perrenoud goes further linking assessment for learning with scaffolding students accordingly to specific needs they represent. He proposes that: "... [t]o the extent that pupils do not have the same abilities, nor the same needs or the same way of working, an optimal situation for one pupil will not be optimal for another .... One can write a simple equation: diversity in people + appropriate treatment for each = diversity in approach". (Perrenoud, 1998).

Perrenoud highlights the importance of individual feedback and scaffolding, based on well detailed personalized evidence of learning, considering students diversity. He underlines the importance of differentiated instruction as the remedy to meet all students' needs and interests. According to his view, diversity in approach can't be achieved, without being clear about current situation of students' knowledge.

#### **4. 2 Conceptual perspective, on equity and differentiation**

There is a controversial perspective regarding equity provision in delivering teaching. Are teachers following the principle of equity when they synchronize teaching and provide the same input for all the students, or is it fair to recognize students needs accordingly, and satisfy their learning pace taking into consideration individual characteristics students represent in the path towards progress? On a first thought it seems logical to provide the same input for all the students, in order to ensure equal outcomes. But does the same input produce the same outcome? The answer is no. Equity is achieved when students' attainments do not show considerable differences, meanwhile methods, strategies and techniques that lead to equal attainments differ accordingly. At this point equity can be defined as an effort to offer various opportunities of learning in the quest to nurture everyone's needs. Contrary to the idea that all students should receive the same input, we defend the fact that prior knowledge, style of learning and other specific elements intervene and make teaching a unique and diverse experience. The perspective is enhanced by researchers that stress the importance of individualized features to be considered when delivering teaching. Teachers should adjust methods to recognise individual, cultural, and linguistic differences between children (Bruner 1996; Bishop and Glynn, 1999).

What are the factors that shape teaching and lead to unequal learning opportunities for every student even though teaching is unified? What are the factors that lead to differences in learning?

As mentioned earlier, there are several factors that influence teaching and they are encompassed under the umbrella of diversity. Elements such as students' cultural uniqueness, experience, intelligence, learning style, prior knowledge, interest and motivation play a crucial role and condition learning to a certain degree. Social and cognitive psychologists, anthropologists and other social scientists have increasingly recognised that the knowledge and experiences children bring to school shape their learning experiences (Bruner, 1996; Bransford et al., 1999). Another aspect to be highlighted is the way students approach learning. It is necessary for teachers and students to consider learning as a recursive process, not a restricted and rigid one, where there is room to intervene, review, reinforce and clarify concepts and information until learning is consolidated and students become confident. Also a significant aspect to be taken into consideration is the pace of learning, which differs from one student to another. In this context, we conclude that teaching and learning has to be a flexible process that allows to move forward and backward until skills are refined and all learners are stretched to reach their potential. This idea is reinforced by (Schunk, 1996), who claims that students also obtain better results when they are working toward process goals rather than product goals, and when tracking progress toward overall goals of learning.

All the factors we mentioned, cause the same input to fail in providing the same outcome. Equity is achieved when students are offered varied and enhanced opportunities of learning that ensure equity and progress for every student. In case of considerable gaps among students attainments and skills, we have a situation where teachers are focusing their instruction to a group of students, leaving behind that way the other groups and their special needs.

#### **4.3 Types of assessment**

##### **4.3.1 Diagnostic assessment**

As discussed earlier educators need to know from where to start. For that they need to gather evidence of learning through various forms of assessment. Diagnostic assessment plays an important role in informing instructors on barriers and gaps students have accumulated during learning. It is an indicator that provides data upon students' knowledge, skills and attitude that are considered as a prerequisite to advance towards more complex concepts and notions. Is it possible to support and facilitate students in their learning without knowing their level of acquisition? Diagnostic assessment is the first step toward knowing where to start. It is often undertaken at the beginning of a

unit of study to assess the skills, abilities, interests, experiences, levels of achievement or difficulties at student or class level. It can involve formal tests that are used to establish a starting point or baseline of informal measurement (e.g. observation, discussions, questioning) Diagnostic assessment plays an important role in guiding programming and planning and helps in selecting teaching methods and assessment choices to maximize learning.

#### **4.3.2 Formative assessment**

Teachers need evidence of learning, first to be clear upon students' level of acquisition and second to notice the effectiveness of teaching. They need to get an insight of students learning. Evidence can be gathered only through a student centred process where teachers have to foster interactive classroom discussions, activities, and learning tasks that provide information of students' progress.

Formative assessment is a systematic practice of tracking students' progress and attainments. It is a continuous process that is supposed to happen at daily basis, closely monitoring learning experiences and using informal assessment throughout learning. Formative assessment is an interaction between teachers and students. Students perform, while teachers monitor and facilitate. It is essential to interact with students and get informed upon their level of knowledge, skills and achievements. Failing to do so, means that teaching and learning are not synchronized and lack of coordination damages the process. Quality of learning is not only needed to inform teachers, but is intentional and has other functions. Information that does not lead to actions is not beneficial in terms of moving learning forward. On the other hand, it serves teachers to modify and adapt instruction. Integration of formative assessment in the process of learning strongly influences instruction method teachers plan and use. A methodology that fulfils students' needs and complies with their level of performance, includes assessment tools that provide feedback and intervention. Formative assessment tools applied informally while monitoring learning range from observation of students during learning experiences, up to posing questions, quizzes, performing activities, projects, homework, information from work samples etc..

#### **4. 3. 3 Summative assessments**

After all efforts given to teaching and learning, educators and students need to compare their attainments with curricula requirements. We should note that summative assessment is a summary of all the efforts, energy and attention given to learning. We need to emphasize the fact that there is a strong correlation between diagnostic and formative assessment on one side and summative assessment on the other side. If diagnostic and formative assessments are systematically and carefully implemented during the process of teaching, summative assessment has positive outcomes, contrary to the fact that if learning hasn't been monitored and teaching adapted, summative assessment would have suffered from negative outcomes. Summative assessment helps teachers and policymakers to evaluate programmes and instruction's effectiveness. Additionally, it contributes in making judgements about student achievement and it influences decision making at certain relevant points in the learning process. Moreover, it aims at measuring the level of achievement of learning outcomes. It is a summary of all the attainments achieved through formal assessment tools such as: tests, labs, assignments, projects, presentations etc. It is a final indicator of students' efforts to acquire and teacher's effectiveness in delivering teaching.

#### **4. 3. 4 Self assessment**

Amongst educational aims, empowering learners to get improved is essential in terms of creating independent learners. Self assessment insists in developing the skill of *learning how to learn*, which nowadays seems to be a major challenge. This mechanism will allow students to use their capacity and potential and develop continuously. *Learning how to learn also comprises the aspect of assessing how one 's learning and advancing towards targets*. As we discussed earlier, the core component of formative assessment aims at monitoring students' process of learning by the teacher, while self-assessment goes further and aims at fostering students monitor their own learning procedures. It is a very beneficial strategy, since it offers opportunities of creating independent learners. An independent learner is motivated to learn, since it has understood the importance of learning and the benefits of self-controlling the quality of acquisition. The procedure relies on metacognition, or being aware of strengths and weaknesses a person has. Involving students in peer and self-assessment, where they are required to judge and express their arguments upon the quality of their own and their peer's work against well-defined criteria raises awareness on the process and makes them patrons of their learning. Studies show that it also impacts motivation and raises interest in learning. Furthermore, guiding students to monitor their own learning, and develop appropriate strategies for improvement is the key element that provides lifelong learning skills. Apart from

consolidating academic competencies emphasis is given to personality development and social aspect. Emotional competencies, such as self-awareness, self-control, compassion, co-operation, flexibility, and the ability to make judgments on the value of information serve students well in school and throughout their lives (OECD, 2002, p. 58). A student who uses the strategy of self-assessment is capable to identify struggles and barriers in his learning. He becomes strategic and uses metacognitive strategies to tackle the barriers and definitely he knows what to do to make progress. Generally, they check their comprehension, they comprehend criteria, compare their attainments with the established criteria and goals of learning, raise further questions, clarify, and when needed they resume learning.

#### **4.4 Motivation**

Motivation is an essential component of learning and it has a maximal effect on learning. It can be considered a powerful side-effect that affects learning. We must agree that it is the internal engine that drives students' willingness of engagement and the decision to be a protagonist in the process of learning. In many cases nevertheless educators' efforts and pedagogical skills to teach, they fail to engage students in the process of learning. As a consequence students demonstrate passiveness and lack of motivation.

We will discuss two issues that impact to some point students motivation and self-perception. First the other people perception causes low self-perception and second generalized, unprofessional feedback damages students' motivation and interest toward learning. In fact low performers stick to the idea that they lack ability, and consequently lose confidence and self-esteem. There is a tendency among teachers and students to classify students as low and good performers, shifting the attention from areas of improvement and skills to ameliorate. This discrimination causes a lot of harm to students self-concept and self-esteem. The same way they are perceived by their student friends as well. This perception has a great impact on students' engagement and motivation in the process of learning. Sometimes students reaction to feedback may be emotional. It is obvious that feedback does not relate to students personality, but to students academic performance. This kind of division leads to a certain discrimination and negative social impact. Teachers should focus on the efforts and engagement of students rather than the outcomes while they track individual student progress. Another perspective is brought by PISA that sees motivation and self-perception as important components that impact learning. PISA found that students are unlikely to self-assess and use control strategies if they lack motivation or self-confidence (OECD, 2003). Another factor that relate to student motivation is the feedback provided by teachers. There is a tendency among them to give *personal comments that relate to personality traits such as: "You are lazy" or "I am not satisfied with your performance"*. These general statements should be avoided, since they do not help the students and impact their self-esteem. Instead these statements should be replaced by constructive feedback that relies on highlighting strengths and areas of work that need extra efforts. On the other hand making low performers believe that they can learn and make progress as well as emphasising the importance of learning, according to studies, has proven to increase motivation.

### **5. Results**

#### **5.1 Findings based on indicators used to assess teaching and learning**

##### *5.1.1 Teachers inform students about lesson intentions and goals*

Clarifying, sharing, and understanding learning intentions, objectives and learning expectations has proved to have a positive effect on students' motivation, attention span and willingness to be active in the process of learning. Simply stated, they know what are they going to do and to what purpose. Teachers on the other hand need clear evidence on the quality of students learning, since it helps them to establish appropriate learning objectives. They need data and information to plan appropriately. Findings bring evidence that 48% of teachers do not share objectives and activities students will involve in which leads to a certain ambiguity and confusion that affects students' concentration and motivation. Not knowing the benefits of the information, knowledge and skills distracts students and lowers their interest and motivation.

##### *5.1.2 Teachers plan differentiated objectives and activities for students with learning difficulties*

Even though students' performance and progress varies accordingly, a high percentage of students are reported to be inactive in the process of learning specific objectives and activities that suit to students with learning difficulties are not designed. This has come as a consequence of not adjusting teaching according to students' particular needs

and learning styles. 68 % of teachers do not incorporate differentiated planning activities into their daily plans, even though the differences of students' performance are considerable.

#### *5.1.3 Teachers provide learning opportunities for all students according to their level and needs.*

Passivity in the process of learning is a concern that relates to the students lack of participation during the sessions. In 48 % of schools a percentage that varies from 20- 23% of students are reported to be passive in the process of learning, which means that they do not engage in the learning activities carried out in the class. Their presence is only physical, while cognitively they are involved, in other thinking. This finding is a serious concern, in terms of quality of teaching and equal opportunities to be provided for every student. There are different reasons that contribute to the passiveness of students in the process of learning. It may be mentioned the fact that some students suffer from a very deep gap of knowledge, which means that prior knowledge is insufficient to build new one, meanwhile other reasons relate to lack of motivation and interest towards learning.

#### *5.1.4 Teachers closely monitor students learning*

Findings prove that learning evidence is sporadically taken from students. Only in 28 % of cases teachers were found to get individualised learning evidence through basic questions that serve as a foundation for other concepts to be understood from all the students. The figure shows that formative assessment is applied arbitrary and it does not allow teachers to provide support and facilitation for students. Even though teachers rarely track students' progress they do not identify concepts to be reviewed and do not keep notes upon students' barriers in learning. Not having this information impedes them to adjust teaching and provide appropriate instruction. In many cases teachers advance to other concepts, even though they have identified barriers and difficulties in comprehending core concepts.

#### *5.1.5 Teachers use questioning-answering technique to gather evidence of learning*

Teachers need to check learners understanding through questioning and evidence from other activities during the sessions. One highly used technique that helps students to clarify their understanding is questioning-answering. This technique helps teachers to gather data upon students' progress, while learning as well as activating their creative and critical thinking. The findings prove that this interaction between teachers and students is focused mainly to well performing students. Teachers do not address questions to poor performers, because they know they do not have the answers. It is worth it to note that some teachers tend to monopolize the sessions, not allowing the students to give their thoughts and ideas and be at the heart of learning. In 23% of cases teachers asks and provide answers themselves, not helping students to clarify their misconceptions or advance in their acquisition. In this situation we can presume that equal opportunities for all students are not provided. On the other hand this kind of teaching approach is teacher-centred and not student-centred letting students inactive and out of the process. Additionally, important elements such as interactivity, inclusiveness, ability to transfer skills to learning situations, development of critical and creative thinking are not provided for all the students.

#### *5.1.6 Teachers provide continuous feedback on students' performance*

Various forms of assessment can be applied at different moments during teaching. *Feedback comes as a reaction upon the quality of student performance in the form of a professional judgement.* Providing feedback means giving information to a student on the quality of his performance highlighting strengths and weaknesses as well as suggesting ways on how to improve. Feedback is followed by scaffolding, which means facilitating learning or guiding students on how to improve. Feedback is beneficial when is evidence based, and it excludes any personal bias or opinions that are not professional grounded. It can be given after completing a task at the end of the lesson or at the end of the unit. Teachers decide to monitor learning step by step starting from simple concepts and advancing to more complex ones. We should note that evidence gathered step by step while advancing to complex concept is more beneficial for both, students and teachers. If barriers of learning are considerable, it becomes difficult for students to understand, and teachers to scaffold. While an immediate reaction and explanation of concepts would facilitate and support learning. Progress should be compared to previous performance of student and not to the performance of the entire class.

Feedback should be professional grounded. In 48% of cases teachers skip this important procedure. They do not re-explain, exemplify, or demonstrate to students miscomprehended concepts, even though they are aware that students are facing difficulties in comprehension. According to inspection findings, some teachers advance to more



complex concepts without making sure all students have been able to acquire basics ones. They justify this fact by saying that even though they have tried to re-explain gap of prior knowledge with some students is considerable and leads to failure comprehension, since current concepts correlate to previous ones.

#### *5.1.7 Teachers gather evidence of students learning through homework*

In 82% of cases homework is superficially discussed, and as a part of a traditional routine a student reads, while the teachers struggle to keep students attention. Students are not given a purpose for listening and are not required to identify and correct their misconception or judge upon peers' performance. Homework does not serve as an instrument that gathers data upon every student level of learning and it doesn't occupy a time of discussion and explanations. Peer assessment or self assessment are not applied as procedures that enable students' discussions and interaction. Homework does not serve as a tool that brings evidence of learning. The same situation is reported with class activities. Teachers gather evidence of learning from active learners, letting behind passive ones.

#### *5.1.8 Teachers base their summative assessment on continuous data of concept consolidation.*

76% of teachers assess evasively, not basing their judgements on continuous evidence and comments that indicates objective attainment of students. In other words, grading is mainly based on the consolidation of sporadic notions and exclusiveness of other key notions that constitute core knowledge and skills. Continuous assessment orients teachers toward objective assessment. Assessment should be a synthesis of various skills gained during a semester, or an academic year. Assessment can't indicate the level of performance if it does not encompass data on all the discussed issues, but is based only on specific and fragmented concepts.

#### *5.1.9 Teachers base students' assessment on explicit, clear criteria defined in advance*

Communicating assessment criteria is crucial, as a matter of transparency, objectivity, motivation and clarity upon the quality of knowledge and skills to be achieved. Criteria also help students to self-assess. *Criteria should be clear, explicit and comprehensible.* Findings show that in 76% of cases assessment criteria are not established and incorporated into lessons plans. Judging upon the findings we conclude that lack of this important component in the sessions, affects objectivity and does not synchronize to standards and professional judgements. Students are not helped to monitor their learning and be aware of the quality of the progress they are expected to achieve. On the other hand lack of the criteria demonstrates limited knowledge upon the standards and criteria teachers should consult and use as well as the ability of assessing objectively.

#### *5.1.10 Teachers help and foster students to learn by identifying strengths and areas for improvement*

Generally teachers skip identifying students' positive attainments and areas for improvement. Only in 13% of cases teachers justify their grading by identifying students' weakest areas. The rate is quite low considering the fact that identifying barriers in learning is a major help that leads and fosters students toward learning. Clarifying students of strengths and weaknesses contributes to objectivity of the assessment first, a transparent relationship with the student and finally helps the students to focus on concepts they have to put more efforts. In 87% of cases teachers are reported to state subjective comments, when grading students. Some of the teachers comments when evaluating are *"I am satisfied with your performance"*, or *"I am not satisfied with you, today"*. These statements do not show anything that relates to objective fulfilment, because it is not compared to the criteria or curricula standards. On the other hand it causes a certain ambiguity with the students, because they are not told where to focus and in what area they should concentrate their efforts, in order to make progress. Grading generally does not tell students what they know and what they don't; it is not an indicator of the student achievements. As outlined by Alfie Kohn (1994): *"Never grade students while they are still learning"* (p. 41). Self-assessment is a procedure found to be applied only in 12 % of cases, but it must be noted that even though, teachers try to encourage student to apply self assessment they do not appoint criteria of assessment.

#### *5.1.11 Teachers designs tests that follow the principle of validity and objectivity.*

According to findings of the reports teachers face difficulties in designing tests. Sometimes it has been reported lack of connection between tests and curriculum. Tests sometimes assess the ability of students to restate facts, which relate to the level of knowledge and skip more complex skills that focus on applying, analyzing, comparing, synthesizing, evaluating and creating as required in the curricula. Moreover, principle of validity that refers to the extent to which questions and tasks represent all important aspects of the units to be assessed are not followed. In

47% of cases tests do not follow the principle of inclusiveness in terms of integrating and assessing all concepts and notions developed during the sessions. Taking into consideration all these elements we conclude that tests carried out by teachers sometimes do not provide objective data on the way students are learning, barriers they are encountering and notions to be prioritized.

## **5.2 Summary of assessment approaches used in classrooms**

- A considerable number of teachers do not base their planning on interactive and differentiated approaches that enable students' inclusion.
- Data prove that teachers are not always systematic in clarifying and sharing learning objective, which impacts students' concentration and motivation.
- Teachers do sporadically track individual students' progress toward the goals which affects an inclusive environment of learning.
- Teachers rarely implement strategies and approaches that fulfil diverse student needs.
- Generally lesson practices suffer from poor use of assessment tools, not providing enough evidence on the way students are learning.
- Individualized feedback that enables active participation of students in the learning process and adaptation of instruction to meet identified needs is not a continuous practice.
- Scaffolding is not provided to every student according to their individualized requirements

### **5.2.1 Analysis of assessment practices implemented by teachers**

Findings show that a considerable number of teachers face difficulties in integrating assessment naturally in the process of teaching as a powerful mechanism that guides and influences the quality of learning. The main barriers relate to the fact that teachers do not always consider students as partners in their common efforts to consolidate knowledge. Another problem is that teachers implement teaching by mainly focusing interaction on well performing learners, not being able to provide learning opportunities for all students, respectively to the needs they represent. This has come as a consequence of failure to monitor and gather evidence from every student, leading to creation of large gap of knowledge to some students and passivity in learning. Skipping a careful and close observation of how students are learning has caused lack of adequate feedback and scaffolding. It should be noted that assessment carried out by teachers poses problems of objectivity in terms of not being based on criteria, continuous records and well designed tests.

## **5.3 Teachers answers on the implementation of assessment procedures**

### **5.3.1 Focus group nr. 1**

*When students get engaged in classroom practices, I can monitor 8-10 students, because we have other activities to do. Some students' level is so low, that I have to start explaining very basic concepts and time is limited, other students get bored and loose interest. The gap of previous information is very wide that does not allow learning to happen. There is no time for differentiated instruction. The number of students in classes varies from 33-38 and I need a teacher assistant to help me with this group of students. Evidence of learning is taken mainly by students with good performance. Poor learners refuse to answer and are passive in the process of learning. Most of them have lost interest and they do not want to participate in the process. Some students do not do their homework, because they find it difficult to perform it as a lack of comprehension of concepts reviewed in the classroom. Time does not permit us to correct students' homework, since the number of students in class is high.*

### **5.3.2. Focus group nr. 2**

*It is almost impossible to provide feedback for every student. Some students face a lot of learning difficulties and I am aware of that, but the gap of knowledge is very significant and if I adjust content to their level, I need to go back two or three academic years. Adjusting teaching to all students levels and needs sounds like impossible. I can't achieve that in 45 minutes with a rigid curriculum to follow. How can I correct the homework, with 36 students in my class, I have to spend all the time, while I have a lesson plan to implement and subsequent tasks to fulfil. Gathering evidence from all students takes all the time. I tried to implement differentiated instruction but I couldn't. The situation got out of control. There was no room to arrange the banks and the groups. Students were distracted, since the noise was disturbing. I have tried to address questions and discussions to the group of passive students, but most of the*

*time they don't have answers to provide. I try to explain, but they do not understand, since their prior knowledge is very insufficient and I think we have failed to some points.*

### **5.3.3 Summary of teachers' answers:**

*According to teachers answers they find it difficult:*

- To monitor all the students work during the process of learning.
- To provide individual feedback to students, since the gap of knowledge of some students is considerable.
- To adapt rigid curricula according to students' pace of learning.
- To build new knowledge and skills, since some students have quite limited prior knowledge.
- To apply differentiated instruction, because they face problem with time management.
- to motivate students to learn
- To implement successful practices, because of the high number of students in classes and lack of teachers assistants.
- To focus interaction on low performers, because they show lack of interest and participation in the process of learning

### **5.3.4 Analysis of teachers' answers**

Teachers express concerns of inability to monitor learning, as a consequence of large size classes, fact that impedes close observation of every student' progress. Additionally they express the concern of a rigid curriculum, which does not provide opportunities to adapt teaching. As main reasons they claim students' lack of motivation and interest, gap of knowledge, and individualized needs as significant difficulties to provide qualitative instruction and adjust teaching to satisfy all learners' needs.

## **6. Implications for monitoring learning**

### *6.1.1 A successful approach of assessment relies on well-established criteria*

The foundations of an objective assessment remain criteria establishment, which should be clear, explicit, measurable and related to the objectives. They allow teachers to review students' progress against objectives and challenge the barriers they encounter in the process of learning. They are responsible for the objectivity and make the assessment measurable and specific. Defining the assessment criteria is the first step toward an objective assessment. Explanation of the criteria and the procedures to fulfil is the second step in informing students on how to learn. At the same importance remains the comprehension of criteria, since students should be clear of expectations and the curve they have to follow to get skilled. Besides the qualitative and quantities effects and the added value they provide to assessment, they serve also as a guide that enable students to monitor the quality of their learning, and take appropriate decisions.

### *6.1.2 Monitoring learning and implementing differentiated instruction provides equal learning opportunities for every one*

According to cognitive perspectives teaching and learning follow a progression of knowledge consolidation, starting with simple and advancing to more complex ones. There is a logical connection and a liaison cause-effect that associates knowledge building. To advance to more complex concepts and notions, teachers need information upon the level of acquisition of current concepts, which can be achieved through use of assessment tools. If simple concepts appear difficult to be mastered there is a stagnation of skills' building and serious barriers that impede learning to develop. Many teachers advance to more complex concepts without making sure that objectives or criteria are met by all the students. This way, they indirectly contribute to accumulation of difficulties students face in the process of learning. While the number of concepts increases, the gap widens, making it more difficult for students to make progress. In this situation with the increasing number of misconception and ambiguity of learning it also becomes difficult for teachers to scaffold and support students.

Tracking students' progress means wisely gathering information and deciding to readjust teaching according to their level and interests. An analogy with diseases would be interesting. We can't provide the same medicine for each patient, no matter the condition they suffer; instead the medicine should match to every patient condition and degree of the disease. It is the same situation with the students, scaffolding should be provided accordingly to specifics they represent. Only by doing so we are adapting teaching to students' needs and interests.

#### *6.1.3 Feedback should furnish every barrier of learning*

Something teachers should consider when gathering evidence of learning is creating learning opportunities and engaging students in similar tasks. Furthermore, observing them during the second tentative of learning and verifying if further scaffolding is needed helps learning and ensures that re-explanation is efficient and it is being reflected on the students' work. In order to ensure progress teachers insist with their comments and explanations until comprehension is achieved. By doing so they make sure that feedback is efficient and functional. Generalized feedback and comments upon students work, sometimes does not bring efficacy, since the problems students pose are not the same.

It is essential to note that feedback is not a rigid technique given sporadically, instead it is a technique that should guide and orient students every time they face difficulties in learning. Feedback can be given orally or in written form. Feedback functions relate to telling students what, how, and why as well as pushing cognitive thinking to higher levels. It should be present at all the stages of learning. Facilitating and guiding students in enhancing and correcting prior knowledge, continuous clarification of concepts during knowledge building, as well as providing expertise on how to put theory into practice. Teachers should insist in monitoring students' learning to the point comprehension and learning has been achieved. The common question randomly used by teachers "Did you understand" should be replaced by real and individual activities of performance, monitoring this way every student's progress and nurturing them with further explanations, according to personal difficulties they encounter.

#### *6.1.4 Feedback is efficient when it is given instantly after students' work*

Lack of specific and diversified feedback does not contribute to qualitative learning. Generalized statements given by teachers are not beneficial, in terms of prioritizing areas for improvement and reviewing the concepts.

Teachers need to identify gaps in students' acquisition, recognize strengths and weaknesses and check learners' progress, if they want to adapt teaching to real needs of students. Identifying what is being performed well and what needs to be revised is the first step of lesson monitoring, which needs to be supported by involvement of students in activities that enable implementation of feedback received by the teachers. Providing feedback instantly after the work is generated, is crucial because old suggestions might be forgotten and lose their function. Following to what degree comments and suggestion are reflected on student work plays an important role, in terms of pursuing students' progress and noticing if extra assistance is needed. Monitoring should be systematic and applied step by step while students build skills; otherwise knowledge might be fragmented and not sustainable. Additionally, teaching students how to use and integrate feedback on their work is of enormous contribution in efforts to make progress. Through this technique learners learn to develop self assessment skills and improve their attainments.

### 6.1.6 Steps of monitoring learning and adapting teaching

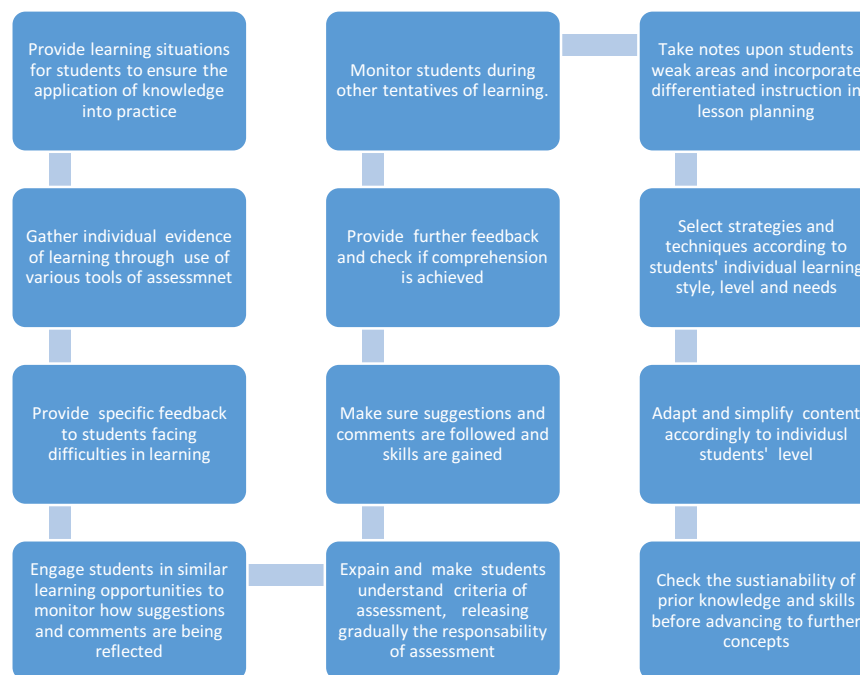


Figure 1. The figure illustrates steps of monitoring learning, gathering evidence and adjusting teaching according to students' needs.

## 7. Conclusions

In order to increase the effectiveness of learning, a range of assessment tools should be systematically integrated into teaching practices, fostering the students to rethink, redesign and review their process of learning. Formative assessment is very significant in terms of equipping students with immediate and meaningful help, when needed. Integration of formative assessment into teaching practices is the key to successful learning. Also, setting clear goals and criteria and sharing them with the students builds a secure destination of their journey into the process of learning. Monitoring the process of learning by gathering evidence and data is the initial step to create opportunities and deliver appropriate instruction for all students, increasing this way their progress. Prior knowledge should be consolidated enough as the foundation that permits new information to grow and develop. To make sure that the foundations are strong enough teachers should not give up in taking remedial actions and techniques that maximize learning. Providing learning opportunities for everyone, in order to demonstrate knowledge, skills and competences they have gained, encourages students to transfer and apply skills of problem solving into daily life. This helps them to strengthen their ability to find answers and develop strategies for addressing problems they are not familiar with. Closely observing students in their learning situations and undertaking remedial actions means encouraging students to tackle difficulties of learning. Engaging learners to monitor their learning through strategies that assess their performance against objectives, as well as identifying strengths and weaknesses makes students become owners of their own learning.

Feedback plays a significant role when it is continuous and not focused on grading, but in helping students to make progress and demonstrate all their potential. Review of teaching approaches is important to ensure equitable student outcomes. Students' uniqueness and diversity have to be considered as decisive features in delivering appropriate teaching and ensuring progress. Incorporation of differentiated instruction in teaching practices leads to curricula achievement of standards and requirements, for all the learners.

## REFERENCES

- Agjensia Kombëtare e Provimeve, (2014). Raport publik Vlerësimi Kombëtar për lëndët: Gjuhë shqipe, Matematikë, Dituri natyre, klasa 3 dhe 5. Tiranë
- Agjensia Kombëtare e Provimeve, (2015). Vlerësimi i arritjeve të nxënësve të klasës së 3- të dhe të 5- të Tiranë  
Assessment for Learning Formative Assessment, taken from <http://www.oecd.org/site/educeri21st/40600533.pdf>
- Bransford, J.D. et al. (eds.) (1999), How People Learn: Brain, Mind, Experience, and School, National Academy of Sciences, National Academy Press, Washington D.C.
- Bruner, J. (1996), The Culture of Education, Harvard University Press, Cambridge, MA.
- Cameron, J. and D.P. Pierce (1994), "Reinforcement, Reward, and Intrinsic Motivation: A Metaanalysis", Review of Educational Research, Vol. 64, pp. 363-423
- Kluger, A.N. and A. DeNisi (1996), "The Effects of Feedback Interventions on Performance: A Historical Review, a Meta-Analysis, and a Preliminary Feedback Intervention Theory", Psychological Bulletin, Vol. 119, pp. 254-284.
- OECD/CERI International Conference "Learning in the 21st Century; Research, Innovation and Policy"
- OECD (2002), Understanding the Brain: Towards a New Learning Science, OECD, Paris.
- Perrenoud, P. (1998), "From Formative Evaluation to a Controlled Regulation of Learning Processes. Towards a Wider Conceptual Field", Assessment in Education: Principles, Policy and Practice, CARFAX, Oxfordshire, Vol. 5, No. 1, pp. 85-102.
- Schunk, D.H. (1996), "Goal and Self-evaluative Influences during Children's Cognitive Skill Learning", American Educational Research Journal, 33, pp. 359-382

# A BRIEF REFLECTION ON EDUCATIONAL INNOVATION

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## Abstract

In this article, I will try to define what is the educational innovation, the context in which the innovative model applies specific characteristics of a certain official curriculum, practical application, a didactic unit designed with the innovative experience and finally, several reflections on the innovative experience, when it comes to learning and teaching a foreign language.

**Keywords:** ITCs, innovation, digital whiteboard, the WebQuest

## Introduction

Over the years many authors (Domínguez, M<sup>a</sup> C. Medina, A. and Cacheiro, ML, 2010, Gordon, 1963, Jaume Carbonell, 2002, Osborn, 1963, Parnes, 1973, Francisco Imbernón, 1996, Melhorn, G And Melhorn, H., 1982, De Bono, 1986, Juan Escudero, 1988, De la Torre, 1982, Guilford, 1991, Rogers, 1991, Torrance, 1992 and Dadamia 2001) have used the technique of educational innovation having as purpose the solving of some of the main educational problems that are emerging throughout the teaching process, such as the disaffection towards everything that has to do with the studies or any minimum effort whose achievement implies a cultural reward. Francisco Imbernón (1996: 64) argues that: "educational innovation is the attitude and the process of inquiry of new ideas, proposals and contributions, made collectively, for the solution of problematic situations of practice, which will entail a change in the contexts and in the institutional practice of education".

Juan Escudero (1988: 86) reaffirms the previous point by adding that: "Educational innovation is equivalent to a given climate in the whole educational system that, from the Administration to teachers and students, fosters willingness to investigate, discover, criticize ... change. " Improvement of the quality of education, involvement in the interests of the students and the rescue of creativity and human wealth stimulate in an unbeatable way the meaning of one's own educational practice.

## What is the educational innovation

As a starting point the definition of educational innovation offered by Professor Antonio Medina: "The educational innovation is based on the creativity of the processes and the permanent design of the same delineating new ways that optimize the decisions and improve the communicative practices. The redesigned processes must be favorably perceived by most members of the organization, who must participate in their planning and continuous adaptation, creating a climate of creativity and updating, which is conducive to building the keys to a fruitful innovation of educational institutions. "

Starting from the definition of the concept that professor Antonio Medina makes of educational innovation, in which creativity and continuous supervision are premises of forced fulfillment, we conclude that creativity is fundamental for the human potential to generate ideas within a minimum value framework for communicating them.

therefore we perceive the term of innovation, as dynamic processes of specific and innovative changes whose result is personal, institutional and social growth. Finally, learning is the community agent and decisive target for the opening to new conceptions of change and creativity.

The real innovation of the performances in the school lies in the potentiality and characterization of the social climate that is capable of constructing, adapting, improving and sharing among all the agents of the school and whose base is based on the identity, quality and empathy and collaborative potential of the social relations that are constructed.

A curriculum of its own should be endowed with a series of processes and ways of working proper to any educational institution, but without forgetting that the true innovation of the school's actions lies in the

potentiality and characterization of the social climate that it is able to construct, Adapt, improve and share among all the agents of the school.

Innovation, creativity and model are the minimum basis to build the cements of a desired climate. If we add the experience of the teaching group and the different examples of interculturality, we can talk about something that is really changing in our conception of the quality of the education system and the value system. Taking these aspects into account, I propose two examples that include the contributions of ITCs in the classroom.

### **Practical application – different contexts**

#### **Example 1**

This study case took place in the Language School in Valdemorro, Spain in 2014. Students were between 20 and 40 years old with level A1 of the MEQR. Most do not have higher education studies and they come to class because they want to learn English so they can help their children with homework.

The teacher uses in class, **Wikispace**. It is a website where users can create, edit, delete or modify content in an easy and fast way through a browser. The teacher posts additional information to what she teaches in class and that she considers interesting for the improvement of the learning of her students, like Videos, articles, vocabulary and information for grammar reinforcement. Students do the homework online, the teacher corrects the first time in orange, students can see the mistakes they have made and can auto-corrected themselves and put the text in blue and if they finally continue with errors, the teacher corrects them With red. This type of learning seems interesting to me for several reasons: each student can correct their mistakes, all the students can see what each of them writes and the corrections of the teacher, therefore serves as a source of inspiration. Through this form of learning/ teaching, improvements are being made regarding students' basic competencies and the digital competence. I consider it an innovation in education because we talk about people who do not like or are not accustomed to using the computer frequently. According to the teacher, at first it was difficult for some of them to learn how to use this website, but with help and being constant, they have managed to learn how it is used and now all of them are very active.

#### **Example 2**

This study case took place in the Junior High-School in Getafe, Spain in 2014. Students were between 11 and 12 years old with level A1 of the MEQR.

The use of the Digital White Board in the learning a foreign language allows a synchronous and asynchronous education favoring cooperative work, sending the world to the classroom and moving the classroom to the global sphere. In this sense the teacher has the freedom to develop new strategies and methods that help the student to "learn to learn", to feel responsible and committed to their results, to understand that only through systematic study can demonstrate what he has learned. It should also be added that teaching with the new technology does not mean knowing how to use it, but the teacher is expected to form the students' opinion through it, "critical sense, hypothetical and deductive thinking, observation and research faculties, The imagination "(Philippe Perrenaud 2008: 109).

### **Reflection on educational innovation**

In the traditional methodology of teaching, the teacher was the only one who possessed the knowledge necessary to be transmitted and his obligation was to inculcate certain values. However, times have changed, and nowadays we can talk about the creation of a more permissive environment that allows students to build or expand their knowledge in any field of knowledge. All purposes, information, resources and strategies are aimed toward the possibility of self improvement, to the ITCs as a new technology where the teacher and students are able to move around the world, choosing between a wider range of options and their Adaptation in the classroom and the library, daily life and subsequent placement in the world of work. "At last we have reached a universe without real boundaries characterized by hypertext." (Philippe Perrenaud 2008: 111)

One of the aspects that characterize innovation in education is the self-management of learning by students, they can use any method or strategy through which they can effectively manage their own activities towards the achievement of their goals. In this modality, students are expected to take an active and committed role both with their achievements and with their difficulties. In this way, the student is devising his autonomy regarding time, space, own form and pace of learning. The student is more protagonist of his formation than in the conventional formative



actions, and the control of the will to learn depends more on himself than on the teacher. Through teamwork, the student encourages the development of his critical thinking. To create an innovative environment, a series of agents (teachers, managers, administrative staff, etc.) must be involved in order to contribute to maintaining a proper climate.

### **Hypothesis on educational innovation according to experience**

Progress in education must necessarily include a set of activities that are not only novel but also designed to make communication a process of constant exchange of opinions and data between educators and students. Educational institutions will not be anchored if the guidelines of innovation, development and knowledge are always followed. As a consequence, a climate is enhanced where all possibilities are valuable and constructive, thanks to the ability to put oneself in the place of the other and the projection of the future of a collaborative community obtains all school achievements.

At an early age, students absorb knowledge, procedures and attitudes, so that a teacher interested in changing processes can convey everything that is proposed using the appropriate tools. If both teachers and schools are innovative, innovative students are reached. An innovative teacher must be aware of the progress, of the changes that occur in his field of knowledge and in the pedagogical and psychological progress. An innovative proposal of education starts from the conception of education as a potential development process. The student will be active and passive in every decision making. According to Antonio Medina, to design a model of innovation in the classroom you must take into account several processes:

- socio-communicative: climate, student-student relations; student- teacher ;
- artistic: changing situations, diversity of tasks, attention to the singularity of each practice;
- collaborative: collaborative climate, culture, participatory-cooperative task
- technological: impact of ITCs, systematization, structuring and integration.

### **The context in which the innovative model is being applied**

It has been chosen a group of students from a private Junior High-School from Getafe, Madrid. There are 22 students in the class.

It has been chosen a group of students from a private Junior High-School from Getafe, Madrid. There are 22 students in the class.

### **A didactic unit designed with the innovative experience**

A curriculum theme corresponding to Unit 2 of the textbook used in class has been chosen: Real English.

The learning objectives are : to comprehensively read a magazine article about the colors of "good" and "bad" foods, read an article about specific foods from India, Mexico and Morocco, listen and understand a conversation and an interview , learn the name of foods from different countries, know how to say things they like and things they do not like, describe a meal, practice the use of *There is/ There are*, using *some y any*, *How much y How many?*

The contents are divided into several blocks:

Block 1: vocabulary related to food, countries, nationalities and languages.

Block 2: Read and understand two texts related to food

Block 3: Learning grammar forms: *There is / There are*; *Some / any*; *How much / How many?*

Block 4: listen and understand a conversation about meals and an interview with a cook.

Block 5: offer personal information - talk about things they like or dislike

Block 6: write a short essay on food.

The evaluation criteria are as follows:

Know how to talk about traditional food from different countries: role-play.

Know how to order different types of food in a restaurant: role-play

Understand and know how to correctly use grammatical contents: know how to ask how much cost the fruit, how to order different dishes.

Know how to write and describe a food dish by putting into practice both the vocabulary learned and the grammatical structures.

Know how to identify food dishes typical of different countries.

Know how to say things that you like or do not like about food types.

### **Practical case**

As always, before beginning a new unit, the teacher reviews the old unit so that the students can remember what they have been studying. Then they are explained the contents of the current unit and the objectives that are expected to be achieved. Of course, the students already know that at the end of the unit they will have an exam so that the teacher can see if they have reached the proposed objectives or it is necessary to work more this unit. The unit has been carried out over 5 sessions, each of 50 minutes. The students have shown interest, since what they were studying is information they can put into practice in real life, outside the classroom.

In order to understand well when should be used How much and How many the teacher has designed a game that the students loved. Each of them carried a leaf (the same for each of them) with different food items. Then each of them is assigned a piece of paper with the price of an article.

The activity has been organized as a competition. The work was individual. All the students had to talk to each classmate and ask how much it costs an item and food to get all the prices. The students liked this activity because they are usually sitting in their desks and to carry out this activity they have had to go from partner to partner until they found out all the prices. Other innovative activities have been made through the digital board as these games to memorize or group different elements.

Unit 6 count non count nouns

basico1-2012-13.wetpaint.com/page/Unit+6+count+non+count+nouns

3. Do we use many in affirmative sentences?  
4. Do we use a lot of in questions? When?

**Find the elements in each group**

**Instructions**

Link the words in groups. Click on any element and then complete its group according to the criteria specified on the top. If you want to unselect an element, click on it again.

Relaciona estos elementos

orange	cream	cheese
strawberry	chicken	milk
banana	butter	asparagus
apple	water	steak
artichoke	lettuce	lamb chops
coffee	tea	courgettes
pork	cabbage	sausages
yogurt	fruit juice	wine

Num. Tries: 0/2  
Score: 100  
Time: 00:00

**CAMPUS prometeo**  
DONDE APRENDER LO QUE QUIERES

Memory Game  
Try to remember what you see

Students really enjoyed watching this video [http://www.youtube.com/watch?feature=player\\_embedded&v=L4Jd3-MGYMw#](http://www.youtube.com/watch?feature=player_embedded&v=L4Jd3-MGYMw#)! about the typical shops of Scotland: SCOTTISH FISH AND CHIPS. To develop the intercultural competence, the teacher has put this authentic video and explained to the students that there are shops in Scotland that sell only different types of fish battered with chips and that the Scots love this kind of food.

Unit 6 count non count nouns

SCOTTISH Fish & Chips

www.youtube.com/watch?feature=player\_embedded&v=L4Jd3-MGYMw#

YouTube ES

Subir video

Iniciar sesión

Guía

0:14 / 2:03

**SCOTTISH Fish & Chips**

nick higgins · 14 videos

24.374

Suscribirse 64

Me gusta

Información

Compartir

Añadir a

Subido el 14/09/2008

A night at the Valiente Chip shop in Auchtermuchty, Fife, Scotland

Restaurante Terror

Fish & Chips crispy batter recipe with Guinness How to make

¿Te aburrías en la escuela?

Edinburgh - Fish and chip shop

Anthony Bourdain tries Fish & Chips in Scotland!

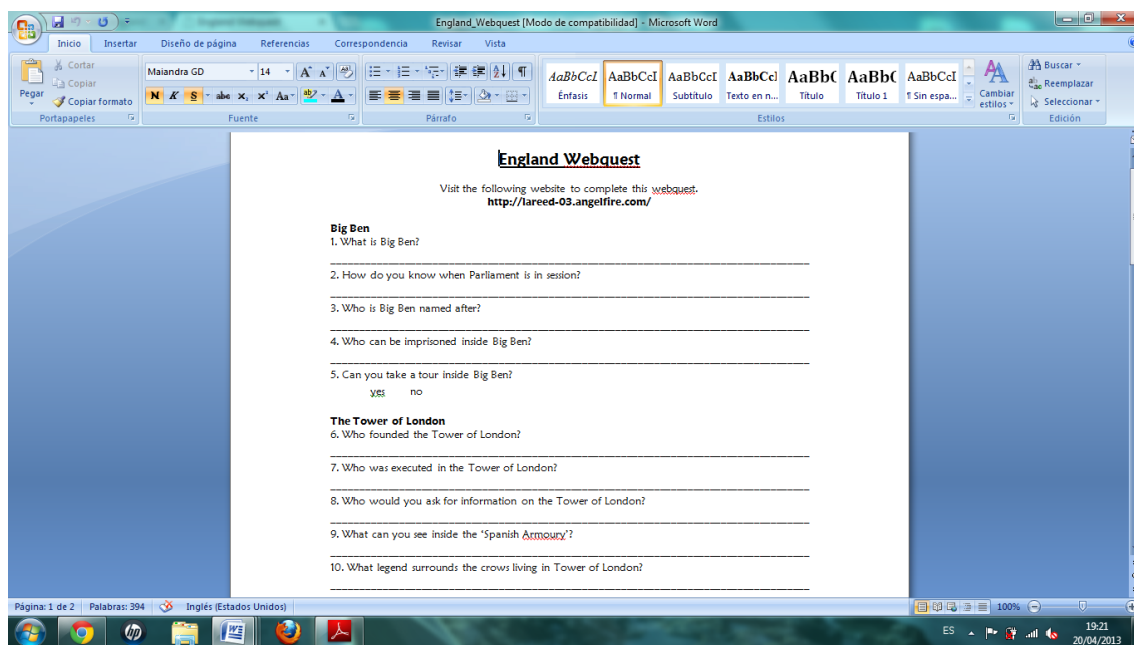
cookingVid - oz fish 'n' chips

What's involved in running a Fish & Chip shop?

Another innovative activity from my point of view has been the use of a WebQuest created by Mrs. Reed:



One of the five sessions has been held in the computers classroom because the teacher believes that in a didactic unit students have to develop the eight core competencies established by the MECR. In the computers classroom, students have developed digital competence and intercultural competence. The students have worked in groups of two (cooperative work) and have done the mentioned WebQuest. If they clicked on each photo, there was information about the monument that was represented in the photo. For example, as you can see in the captures above, by clicking on Big Ben ,students could see information about it. In the end, they had a Quiz to see what the students had learned about the most important places in England.



As homework, they had to write a brief essay about what they liked and did not like about England and if they would like to visit the country.

## Results obtained

The criteria that have been taken into account for the evaluation are the following:

### 1. Evaluation

The evaluation will be made according to the evolution that each student has had during all the fifth sessions. There will be two kind of evaluation:

#### ➤ Individual evaluation

	1	2	3	Points
Content exposure	Acceptable	Ok	Very good	
The investigation you have done	Appropriate	Original	Interesting and original	
The quality of the chosen material /information	Acceptable	Ok	Great	
The oral presentation of the presentation (Correct form the grammatical point of view, variety of the vocabulary, the pronunciation)	Acceptable	Ok	Great	

➤ **Final group evaluation:**

	1	2	3	Points
<b>The presentation quality</b>	Acceptable	Ok	Very good	
<b>The objectives were accomplished</b>	Some of them	Most of them	All the objectives	
<b>The oral presentation</b>	Acceptable	Ok	Great	

As I mentioned before, the results have been positive. All students have taken very high grades.

### **Conclusions**

It can be said that we can create a favorable climate in the classroom through a type of innovative learning while developing the 8 core competencies through information and communication technologies. ICTs break the limit of the traditional classroom because there are multiple possibilities of and personal or collective development that the technological revolution has been proposing in the different spheres of social activity. The globalized world, through the Internet and digital information, has produced important changes in the realm of contemporary society. Most current students are experts in the use of electronical methodology and we must explore this new capability.

It is considered that the new technologies have a socializing and educational character. With the help of ITCs, students have more opportunities to learn and research in a faster, varied and effective way by developing their skills of analysis, expression and comprehension. ICTs allow all students to participate at the same time, even the most timid ones; At the same time, due to the play dimension, students are motivated to study / learn.

## REFERENCES

- García-Retamero Redondo, J. (2010) : DE PROFESOR TRADICIONAL A PROFESOR INNOVADOR, revista digital para los profesionales de la enseñanza.
- Medina, A. (1988). *Didáctica e interacción en el aula*. Madrid, España: Cincel.
- Medina, A. (1998). *Liderazgo en la educación*. Madrid, España: Cincel.
- Medina, A. (Ed.). (2009). *Formación y desarrollo de las competencias básicas*. Madrid, España: Universitas.
- Medina, A y Domínguez, M<sup>a</sup> C. (1995). *Enseñanza y currículum para la formación de personas adultas*. Madrid. EDIPE.
- Medina, A. Domínguez, M<sup>a</sup>.C., Sánchez, C. (2010, Marzo). *Formación de las competencias socio-profesionales desde la función tutorial*. III Jornadas de Redes en la UNED. Madrid.
- Medina, A. Domínguez, M<sup>a</sup>.C. y Medina, M. (2010) "Tendiendo puentes hacia la interculturalidad: Las nuevas escuelas y docentes". En F. Sadio (Ed.), *Tendiendo puentes hacia la interculturalidad* (pp.19-50). Granada: Ediciones AKL.
- Medina, A. (2011) "La Innovación en el aula: referente para el diseño y desarrollo curricular." Issn: 0718-9729 *Marco europeo común de referencia para el aprendizaje y la enseñanza de las lenguas*. Estrasburgo: Comité de la educación, Consejo de Europa, edición provisional 1996 [2<sup>a</sup> ed. provisional 1998, ed. Definitiva 2001].
- MARQUÈS GRAELLS, Pere (2011). "¿Por qué las TIC en Educación?" En PEÑA, Rosario y colaboradores- "Nuevas tecnologías en el aula. Más de 20 proyectos TIC para aplicar en clase". Tarragona: Editorial Altaria ISBN 978-84-938898-0-7
- MARQUES GRAELLS, Pere; DOMINGO COSCOLLOLA, Maria (2011). "Aulas 2.0 y uso de las TIC en la práctica docente". Revista Comunicar 37
- McMillan, J. H. (2000): "Basic assessment concepts for teachers and school administrators". College Park, MD: ERIC Clearinghouse on Assessment and Evaluation.
- Medina López, I.M. (2007): "El uso adecuado de las TIC en el aula". En El lapicero. Disponible en : <http://www.ellapicero.net/node/1301>
- G.Moss, Dr. Carey Jewitt, Professor Ros Levačić, Dr. Vicky Armstrong, Alejandra Cardini and Frances Castle (2007): "The Interactive Whiteboards, Pedagogy and Pupil Performance Evaluation: An Evaluation of the Schools Whiteboard Expansion (SWE)" Project: London Challenge, School of Educational Foundations and Policy Studies, Institute of Education, University of London
- Ontalba-Ruipérez, José Antonio (2004): "Nuevos planes de estudio y marco profesional en la biblioteca pública española". En Procedimos II Congreso Nacional de Bibliotecas Públicas: La biblioteca pública: compromiso de futuro, (pp. 209-212)
- Ontalba-Ruipérez, José Antonio (2006): "El profesional de la información: la autoformación en una profesión en constante evolución". En Documentación digital. Barcelona: Universidad Pompeu Fabra.
- Panizzo, A.C.(2010): *TIC Y EDUCACIÓN ¿Cómo formar a los futuros profesionales de la educación en el uso de las nuevas tecnologías? Una propuesta didáctica en la formación docente*, Congreso internacional Iberoamericano de Educación, Argentina.
- Perrenoud, P. (1998), "From Formative Evaluation to a Controlled Regulation of Learning Processes. Towards a Wider Conceptual Field", *Assessment in Education: Principles, Policy and Practice*, CARFAX, Oxfordshire, Vol. 5, No. 1, pp. 85-102.
- Puren, C. (2004: ) : "DEL ENFOQUE POR TAREAS A LA PERSPECTIVA CO-ACCIONAL" published article in the magazine Porta Linguarum de la Universidad de Granada en 2004, n°1, enero 2004, pp. 31-36.
- RÍOS MUÑOZ, D. y REINOSO HERNÁNDEZ, J. (2008): PROYECTOS DE INNOVACIÓN EDUCATIVA *Texto de Apoyo Didáctico para la Formación del Alumno*, Chile.
- Salinas, J. (2004): "Innovación docente y uso de las TIC en la enseñanza universitaria". En Revista de Universidad y Sociedad del Conocimiento (RUSC), 1(1). Disponible en: <http://www.uoc.edu/rusc/dt/esp/salinas1104.pdf> [consulta: 16 de marzo de 2013]

# FOREIGN LANGUAGE ANXIETY AND EFL LEARNERS' SPEAKING PERFORMANCES: FIRST YEAR IBN TOFAIL UNIVERSITY STUDENTS AS A CASE STUDY

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## **Abstract**

Affective variables are some of the various variables that influence foreign language learning, and foreign language speaking, and foreign language anxiety (FLA) is among several outstanding factors that often have a debilitating effect on the oral performance of students learning English as a foreign language. The purpose of this study is to investigate whether Moroccan EFL first-year university students experience FLA when performing orally. It also seeks to define the sources generating foreign language speaking anxiety in students, to identify the extent to which gender-based anxiety affects FLA in language classes, and finally to suggest solutions for reducing this anxiety. Adopting a quantitative approach, the Foreign Language Classroom Anxiety Scale (FLCAS), developed by Horwitz, Horwitz, and Cope (1986) is used as a key research instrument to measure the level of speaking anxiety exhibited by the participants. The sample of the study consists of 100 (50 male and 50 female) Moroccan EFL tertiary students. SPSS 22 is used in this study to analyse the quantitative data. Findings reveal that FLA is pervasive among learners. Results also show that among the three related performance anxieties presented by (Horwitz et al., 1986), namely, 'communication apprehension', 'Fear of negative evaluation', and 'test anxiety', students present a higher anxiety due to their 'fear of negative evaluation'. Ultimately, and based on the t-test performed on this study, it is proved clear that gender has no significant effect on students' FLA in speaking. The study ends with some pedagogical implications to assist teachers in encouraging speaking and striving for a pleasant atmosphere where every student can feel relaxed and motivated to communicate orally.

## **Introduction**

English language has been enjoying a significant role in today's world, and this urged researchers to examine several issues concerning the language, particularly those that help learners communicate effectively. Some of these issues encompass factors that result in better fluency in English speaking and hence better English language performance in the context of foreign language learning. Among these factors that have been examined to impact the performance of language learners, and which also affect English language acquisition is anxiety to speak English (Horwitz, Horwitz, & Cope, 1986; Oxford, 1999; Little, 2003; Tsiplakides&Keramida, 2009; Al Shboul 2013; Krishnan 2013). Anxiety to speak English was postulated to be among the major antecedents of student's Second Language Acquisition (SLA) as it directly impacts the inclination of the learners to communicate (Horwitz, 2001; Canessa, 2006; Zhao Na, 2007). According to some researchers, language anxiety is among the main elements which determine language acquisition and proficiency. There is a plethora of studies in the literature on language anxiety that reveal a consensus of the negative association between language anxiety and language performance especially in the oral context (MacIntyre et al., 1998).

## **Background and Rationale of the Study**

Being a university professor of English as a foreign language, and having taught many classes dealing with the four skills, for students from different proficiency levels, the researcher finds that many students fail to communicate orally in an effective way. Many students get good grades on their written examinations, yet, when it comes to speaking English in oral classes which are devoted to speaking and communicating only in the target language, many students exhibit serious problems and their oral performance is dubious. Several alarming phenomena are noticeable enough in such students; they are often unwilling to participate in the speaking classrooms and share their thoughts and comments; they prefer to use Arabic, their mother tongue, in class, or, even they would rather remain silent viewing speaking in front of the whole class as a threat rather than a chance to improve their communication skills.



Such behaviours are often translated by teachers as indicators of a lack of fluency, a lack of confidence or a lack of linguistic knowledge. Some teachers would even link such reluctant behavior with a lack of interest and motivation, or simply a fact of regarding communication in English and oral classes as unimportant.

These claims fail to recognize the crucial role that some affective factors, other than students' limited linguistic competence, play in learning and speaking a foreign language. Students are very likely to experience anxiety in speaking and communicating in a new foreign language. Therefore, it is vital to understand the nature and sources of anxiety in students and propose solutions to overcome it. The present paper addresses these issues, as well as the role of gender in FLA in the study population.

## Literature Review

### Defining Foreign Language Anxiety

In the perspective of psychiatry, anxiety is described as a normal feeling which comes up in the face of stressful situations. It refers to the state wherein feelings of fear, worry, uneasiness and dread arise in an individual's nervous system (Bouras & Holt, 2007). Anxiety is also defined as "the subjective feeling, apprehension and worry associated with an arousal of the autonomic nervous system" (Spielberger, 1983). It is a normal human feeling, but, excessive anxiety may prevent people from functioning, particularly in very stressful situations (Bouras & Holt, 2007). Anxiety in relation to foreign or second language learning, on the other hand, is defined as the specific negative reaction experienced in particular foreign or second language learning contexts when learners are expected to perform in the second or foreign language (Gardner and MacIntyre, 1993). Young (1991) gave a comprehensive definition to Foreign language anxiety as "the psychological tension, apprehension, and worry experienced by non-native speakers when learning or using a foreign language" (P. 14).

### Types and Components of Foreign Language Anxiety

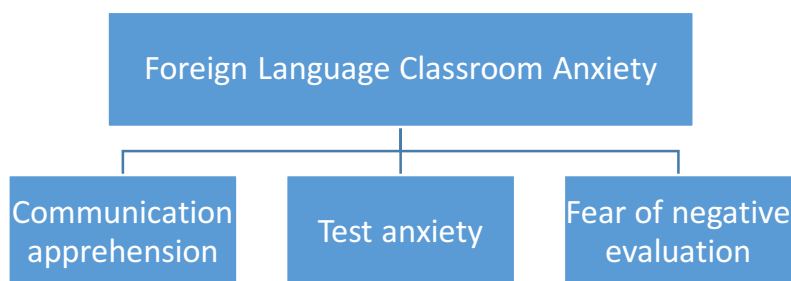
Within a FL situation, anxiety is a complex, multidimensional phenomenon referring to "the feeling of tension and apprehension specifically associated with second language (L2) contexts, such as speaking, listening, and learning" (MacIntyre & Gardner, 1991, p. 284). According to Scovel (1978), there are two types of anxiety: *facilitating anxiety*, which motivates the learner to "fight" the new learning task and take on the new learning challenge, and *debilitating anxiety*, which can push the learner to escape the new educational scenario.

Horwitz, et al., (1986) also differentiate this form of anxiety from general anxiety and referred to it as Foreign Language Classroom Anxiety (FLCA), which can be considered situational anxiety in the context of the FL classroom. Horwitz et. al (1986) classify FLA into three significant types:

1. *Trait Anxiety*: It is an inherent personality characteristic, in other words, it's the person's permanent tendency or predisposition to be anxious. It is a stable feature of personality that refers to a "permanent predisposition to be anxious" (Scovel, 1978; as cited in Ellis, 1994, p. 479).
2. *State anxiety*: Ellis (1994, p. 693) claimed that it is "...the apprehension that is experienced at a particular moment in time as a response to a definite situation." It also refers to a "transitory state or condition of the organism that varies in intensity and fluctuates over time" (Spielberger, 1966, p.12).
3. *Situational anxiety*: or a type of anxiety that is context specific, such as speaking in public or participating in class activities (Ellis, 1994).

Accordingly, FLCA is considered to be situational rather than a trait or state anxiety (MacIntyre & Gardner, 1991; Horwitz, et al., 1986).

In order to deeper examine foreign language anxiety, Horwitz, Horwitz, and Cope (1986) conducted a study and brought forward a theoretical model highlighting the components of FL anxiety.



**Figure 1:** Components of Foreign Language Anxiety by Horwitz et al. (1986)

Horwitz et al. (1986) identified three varieties or sources of foreign language anxiety. The first variety is *communicative apprehension*, which arises from the inability to adequately express thoughts and ideas. The second is *fear of negative evaluation* which is defined as apprehension about others' evaluations, avoidance of evaluative situations, and the expectations that others would evaluate one-self negatively. The third source is *test anxiety* or apprehension over academic evaluation. These three components of anxiety are experienced by many language learners, and pose potential problems because they interfere with and restrain learner's ability and ultimately impede their proficiency in the foreign language. They can cause students to postpone language study indefinitely or to quit learning altogether.

As a consequence of their study, a standard measure has been developed to identify the foreign language anxiety levels known as the **Foreign Language Classroom Anxiety Scale (FLCAS)**. It is a tool including thirty-three items used by foreign language instructors to determine and capture the scope and severity of students' anxiety and to examine its effects on learning in different contexts.

### **Studies on Foreign Language Anxiety**

For decades, the body of extensive research undertaken on foreign language anxiety has been to a great extent concerned with the role of anxiety in language learning in general, its causes and the way to cope with it. (Brown, 1974; Krashen, 1985; Horwitz et.al, 1986; Oxford, 1999; Aida, 1994; Idri, 2012). Research has shown that anxiety is a relatively common phenomenon in FL classes (Horwitz& Young, 1991; and Horwitz, 2001).

The studies in the literature about FL classroom anxiety have targeted the four skills: listening, reading, speaking and writing (Saito et al. 1999; Sellers, 2000 and Elkhafaifi 2005). However, it is widely accepted that speaking is the most anxiety provoking skill for learners (Horwitz, &Schallert, 1999). Therefore, many studies dealt with and explored anxiety associated with foreign language speaking (Cheng et al., 1999; Kitano, 2001; Gregersen and Horwitz, 2002; Liu, 2007; Tsiplakides and Keramida, 2009; Subaşı, 2010; Fang-peng and Dong, 2010).

Kitano (2001) investigated the sources of FL speaking anxiety and found a relationship between anxiety and both fear of negative evaluation and perception of low ability in relation to peers and native speakers. Many other researchers for example, suggest that language-anxious students study more than their low-anxious counterparts; however, their level of achievement often does not reflect that effort (Onwuegbuzie, Bailey, & Daley, 1999; Liu, 2008; Jackson & Liu, 2008 ; Panayides & Walker, 2013). Other findings show that Anxious students most likely do not take part in oral classroom activities (Ely, 1986) because they think that speaking in class is 'always a problem' Hashemi (2011). Such students end up, consequently, skipping classes and postponing their homework (Argaman& Abu-Rabia, 2002).

In the Moroccan context, and to the researcher's knowledge, not much has been said about FLA. One research was conducted by Akhajam, S.E. (2016) who investigated the relationship between anxiety and scholastic achievement among university students of English. Another one is by Kettani (2014) who investigated the general traits of FLA among Moroccan secondary and high school students. In an attempt to go further with the issue of FLA in the Moroccan context, the present study aims at exploring the nature and sources of anxiety in the oral language classroom as exhibited by EFL university students. The study also looks into the possible relationship between FLA and gender.

### **Research questions**

To achieve the proposed objectives of the study, three research questions were constructed as follows:

- 1- Do Moroccan EFL first year university students experience FLA when performing orally in class?
- 2- What are the sources generating foreign language anxiety in EFL students?
- 3- Is there a relationship between gender and students' FLA in language classes?

### **Methodology**

Subjects of this study are 100 students. All are first year university students studying English at the faculty of letters and humanities ibn Tofail in Kenitra, Morocco. Subjects were chosen to be first year students, that is, they are beginner learners and are still at a comparatively low level of English proficiency, and thus can more likely experience foreign language anxiety in performing orally. To control the variable of gender, both groups were chosen encompassing the same number of male (N=50) and female students (N=50). As a research instrument, Horwitz's et

al., (1986) Foreign Language Classroom Anxiety Scale (FLCAS) is used to measure the level of FLA. It is a self-report tool used to elicit the participants' anxiety responses towards speaking EFL in English classes. This scale was chosen because 'it has been administered worldwide in different languages and various contexts, and demonstrates high validity and reliability' (Alshahrany, 2016: 69).

For the sake of collecting data, the original version of the Foreign Language Classroom Anxiety Scale (FLCAS) developed by Horwitz et al. (1986) is employed. It comprises 33 items covering all the three dimensions of anxiety, which are "communication apprehension", "fear of negative evaluation", and finally "test anxiety". The scale is constructed as a five-point Likert scale, ranging from strongly disagree (1) to strongly agree (5). The students' responses were transformed into numbers. They were tabulated and stored into the computer for analysis. The data analysis has been done quantitatively both via simple frequency counts, and via SPSS.

## Results and discussion

The results of this study are discussed by addressing each of the three research questions:

1- Do Moroccan EFL first year university students experience FLA when performing orally in class?

After counting the answers to each item in the questionnaire as answered by students, the following table (Table 1) shows the statistical analysis for the construct of anxiety. Students' responses were transformed into percentages. Both 'strongly agree' and 'agree' responses were combined together to gain a global degree of agreement, while the responses 'disagree' and 'strongly disagree' were also matched to get an overall measure of disagreement.

	Frequency	Percentage	
<b>Strongly agree</b>	26	26%	<b>61%</b>
<b>Agree</b>	35	35%	
<b>Neutral</b>	14	14%	<b>14%</b>
<b>Disagree</b>	17	17%	<b>25%</b>
<b>Strongly disagree</b>	8	8%	
<b>Total</b>	100	100%	<b>100%</b>

**Table 1:** Foreign Language Anxiety Percentage

It could be seen from table 1 that the majority of the respondents answered the items of the construct of anxiety with 'strongly agree', 'agree', with percentages of 26% and 35% respectively. This makes the overall percentage of agreement 61% which is an indicator of a high level of anxiety. Students' neutral responses represent 14%, whereas the percentage of the sum of disagreement responses is 25%, encompassing both 'disagree' and 'strongly disagree' answers which are of 17% and 8% only. This sums up that the majority of respondents, or 61%, show that they experience anxiety when called to speak, or do speak in English in class.

This goes hand in hand with Zreagat and Kaur (2014) finding of a study conducted in Jordan on student's levels of autonomy and anxiety and the relationship between these two variables with oral achievement. Their study showed that 70.62 % of the sample faces anxiety while they try to speak in English. In the same stream, Muhaisen and Abed Al-Haq (2012) found that students face high anxiety when they try to speak in English whether inside or outside English classroom.

2- What are the sources generating foreign language anxiety in EFL students?

To answer this question, a classification of the FLA scale items was done to match with the three components of FLA as presented by Horwitz et al. (1986) which are "communication apprehension", "fear of negative evaluation", and finally "test anxiety". These three elements represent the sources of FLA for students. Following the 5-point likert scale in answering each element of the 33 items, a numeral code was given to each point, ranging from 1 for 'strongly

disagree' to 5 for 'strongly agree'. These scores were then classified according to every item in each source category. After counting means of scores for each item, an overall general means of the included items were calculated inside each source category as shown in the table:

	Means Score
<b>Communication Apprehension</b>	1.0
<b>Test Anxiety</b>	0.9
<b>Negative Evaluation</b>	1.6

**Table 2:** Means Scored by Students for FLA Source

Data shows that the questionnaire items classified under 'Fear of negative evaluation' category got the highest scores with a total means of 1.6. 'Communication apprehension' was scored second with a means of 1.0, while 'test anxiety' was scored slightly below with a means of 0.9. These results show that Moroccan EFL students are mostly afraid of being negatively judged by their professor as well as classmates. This feeling may hinder their oral performance and prevent them from expressing themselves in class.

This fear of negative evaluation comes under different forms such as the fear of making mistakes and being corrected in front of students, the unwillingness to volunteer in class, the nervousness to talk in class, and the belief that other classmates are better language users who will undoubtedly make fun or laugh at the speaker. These findings confirm the study of Subaşı (2010) who found that sources like fear of negative evaluation, teachers' manners of error corrections, students' low language proficiency and students' self-perceived ability in comparison with that of their peers or native speakers impacted negatively Turkish EFL students' speaking.

### 3- Is there a relationship between gender and students' FLA in language classes?

To address this question, the means scores for males and females in every chosen item, as ranging from 5 to 1, were calculated, and a t-test was run to investigate the significance if existing between the students' scores and their gender. Yielded results show that there is no significant difference between the variable of gender and the students' anxiety level as both males and females tend to display a high level of FLA.

Gender	N	FLA level scores
<b>Female</b>	50	-0.42**
<b>Male</b>	50	-0.41**
<b>Total</b>	100	-0.42**

\*\* $p < 0.01$  level (2-tailed).

**Table 3:** The Relationship between Gender and FLA Level

Supportive to this finding are the studies of Onwuegbuzie, Bailey, and Daley (1999) and that of Akhajam (2016), who investigated the influence of gender on FLA and found no significant correlations. Elkhafaifi (2005) also found no significant difference in the levels of Arabic listening anxiety between males and females learning Arabic. In another study, Kao and Craigie (2010) investigated the effect of FLA on Taiwanese university students' English performance, and found that FLA is a significant predictor of English achievement regardless of gender.

### Conclusion

The current paper reached a main conclusion which is Moroccan EFL undergraduate students in Ibn Tofail University do experience anxiety when they attempt to speak in English in class. Therefore, professors are called to focus on conversation skills which will develop students' communicative language skills and in turn reduce their level of

anxiety. To achieve so, lecturers should focus more on oral communication and give their students the chance to speak and express their different views. This might be a bit difficult in the Moroccan university context which is characterized by overloaded classes; a fact that makes any organization of oral communicative activities quite problematic.

By investigating the sources of FLA, the findings of this paper also reported that students feel more anxious because of their fear of negative evaluation. Hence, the following are some recommendations that may help students overcome, or at least, lower their level of anxiety if taken into account.

Professors should create a comfortable atmosphere for students to express themselves orally by means of eliminating competition between classmates. They should also tolerate mistakes, encourage students to talk in front of the whole class by giving presentations, and especially give positive feedback to the students so as to raise their self confidence in speaking. The students' speech errors could be corrected indirectly by professors to avoid any feeling of public humiliation by students. Professors should also try to use a simple language in class to assure students that speaking is an easy task to do, and that they have the necessary linguistic tools to perform well in it.

At the end, everyone ought to know that anxiety is a common natural human state. Everybody feels a degree of anxiety that varies from being unnoticeably slight to flagrantly apparent, and when using a foreign language, it becomes easier for such a feeling to surface. Consequently, Both professors and students have to cope to decrease FLA for a better language learning.

## REFERENCES

- Akhajam, S.E. (2016). Anxiety and scholastic achievement of Moroccan EFL college learners: *JEELS*, Volume 3, Number 1. P : 28-37.
- Alshahrani, M., & Alshahrani, A. (2015). An investigation of anxiety among elementary school students towards foreign language learning. *Studies in Literature and Language*, 11(1), 29- 40.
- Al-Shboul, M. (2013). The level of e-Learning integration at The University of Jordan: Challenges and opportunities. *International Education Studies* 6 (4): 93.
- Argaman, O., & Abu-Rabia, S. (2002). The influence of language anxiety on English reading and writing tasks among native Hebrew speakers. *Language, Culture and Curriculum*, 15(2), 143-160. <http://dx.doi.org/10.1080/07908310208666640>
- Aida, Y. (1994). Examination of Horwitz, Horwitz, and Cople's construct of foreign language anxiety: The case of students of Japanese. *Modern Language Journal*, 78 (2), 155-168.
- Bouras, N., & Holt, G. (2007). *Psychiatric and Behavioural Disorders in Intellectual and Developmental Disabilities*. Cambridge, UK: Cambridge University Press.
- Brown, H.D. (1974). Affective variables in second language acquisition. *Language Learning*, 23, 231-243.
- Canessa, L. (2006). Foreign Language Anxiety: a Close Look at Nonnative Foreign Language Teachers. In *Research as a Tool for Empowerment: Theory Informing Practice*, (Ed.) by David Schwarzer, Melanie Bloom, and Sarah Shono. Greenwich, Conn.: Information Age Publishing.
- Cheng, Y., Horwitz, E. K., & Schallert, D. L. (1999). Language anxiety: Differentiating writing and speaking components. *Language Learning*. 49, 3, 417-46.
- Elkhafaifi, H. (2005). Listening comprehension and anxiety in the Arabic language classroom. *The Modern Language Journal*, 89(2), 206-220.
- Ellis, R. (1994). *The Study of Second Language Acquisition*. Oxford, UK: Oxford University Press.
- Ely, C.M., (1986). An analysis of discomfort risktaking, sociability, and motivation in the L2 classroom. *Language Learning*: Volume 36, Issue 1 Pages 1–25.
- Fang-peng, G., & Dong, Y. (2010). A study on college students' anxiety to spoken English. *Canadian Social Science*, 6, 2, 95-101.
- Gardner, R. C., & MacIntyre, P. D. (1993). A student's contributions to second-language learning. Part II: Affective variables. *Language Teaching*, 26, 1-11.
- Gregersen, T., & Horwitz, E. K. (2002). Language learning and perfectionism: Anxious and non-anxious language learners' reactions to their own oral performance. *The Modern Language Journal*, 86, 4, 562-570.
- Hashemi, M. (2011). Language stress and anxiety among the English language learners. *Procedia-Social and Behavioral Sciences*, 30, 1811–1816. Retrieved from <http://www.sciencedirect.com/science/article/pii/>
- Horwitz, E. K. (2001). Language anxiety and achievement. *Annual Review of Applied Linguistics*, 21, 112-126.
- Horwitz, E. K., Horwitz, M. B. & Cope, J. (1986). Foreign Language Classroom Anxiety. *Modern Language Journal*, 70, 125-132.
- Horwitz, E. K., & Young, D. J. (1991). *Language Anxiety: From Theory and Research to Classroom Implications*. Englewood Cliffs, NJ: Prentice Hall Englewood Cliffs.
- Idri, N. (2012). Foreign Language Anxiety Among Algerian EFL Students: The Case of first year Students of English at the University of Abderahmane Mira-Béjaia; LMD (Licence/Master/Doctorate) System Group. *Universal Journal of Education and General Studies*, 1, 3, 055-064.
- Liu, M., & Jackson, J. (2008). An exploration of Chinese EFL learners' unwillingness to communicate and foreign language anxiety. *The Modern Language Journal*. 92, 1, 71-86.
- Kao, P.C., & Craigie, P. (2010). Foreign language anxiety and English achievement in Taiwanese undergraduate English-major students: An empirical study. *Hungkuang Journal*, 61, 49–62.
- Kettani, Y. (2014). *Foreign Language Anxiety and Efl Learning*. Lap Lambert Academic Publishing GmbH & Company KG.
- Kitano, K. (2001). Anxiety in the College Japanese Classroom. *The Modern Language Journal*, 85, 4, 549-566.
- Krashen, S. D. (1985). *The Input Hypothesis: Issues and Implications*. New York: Longman.
- Krishnan, S., Al\_Lafi, Q., & Pathan, Z. (2013). Motivational Factors That Impact English Language Learning in an Arab Model School, Jordan: An Empirical Investigation. *Journal of Emerging Trends in Educational Research and Policy Studies (JETERAPS)* 4(6): 867-871. *Scholarlink Research Institute Journals*, 2013 (ISSN: 2141-6990).

- Little, D. (2003). Learner Autonomy and Second/Foreign Language Learning. Subject Centre for Languages, Linguistics and Area Studies, Guide to good practice. University of Southampton.
- Liu, M. (2007). Anxiety in oral English classrooms: A case study in China. *Indonesian Journal of English Language Teaching*, 3, 1, 119-137.
- Liu, M. (2008). Anxiety in Chinese EFL students at different proficiency levels. *System*, 34(3), 301–316.
- MacIntyre, P. D., Clément, R., Dörnyei, Z., & Noels, K. A. (1998). Conceptualizing Willingness to Communicate in a L2: A Situational Model of L2 Confidence and Affiliation. *The Modern Language Journal*, 82 (4), 545-562.
- MacIntyre, P. D., & Gardner, R. C. (1991). Language anxiety: Its relationship to other anxieties and to processing in native and second languages. *Language Learning*, 41, 513-534.
- Muhaisen, M. & Al-Abed Al-Haq, F. (2012). An Investigation of the Relationship Between Anxiety and Foreign Language Learning Among 2nd Secondary Students in Second Amman Directorate of Education. *International Journal of Humanities and Social Science*, 2(6), 226-240.
- Onwuegbuzie, A. J., Bailey, P., & Daley, C. E. (1999). Factors associated with foreign language anxiety. *Applied Psycholinguistics*, 20(2), 217-239.
- Oxford, R.L. (1999). Anxiety and the language learner: New Insights. In Arnold J. (Ed.), *Affect in Language Learning*. Cambridge: Cambridge University Press.
- Panayides, P. & M. J. Walker, (2013). Evaluating the Psychometric Properties of the Foreign Language Classroom Anxiety Scale for Cypriot Senior High School EFL Students: The Rasch Measurement Approach. *Europe's Journal of Psychology*. Vol. 9 (4) P : 439- 516.
- Saito, Y., Garza, T. J., & Horwitz, E. K. (1999). Foreign language reading anxiety. *The Modern Language Journal*, 83(2), 202–218. doi:10.1111/0026-7902.00016
- Scovel, T. (1978). The effect of affect on foreign language learning: A review of the anxiety research. *Language Learning*, 28(1), 129-142.
- Sellers, V. D. (2000). Anxiety and reading comprehension in Spanish as a foreign language. *Foreign Language Annals*, 33(5), 512-520.
- Spielberger, C. D. (1966). Theory and research on anxiety. *Anxiety and behavior*, 1.(3), 413-428.
- Spielberger, C.D. (1983). *Manual for the State-Trait Anxiety Inventory (Form Y)*. Palo Alto, CA: Consulting Psychologists Press.
- Subaşı, G. (2010). What are the Main Sources of Turkish EFL Students' Anxiety in Oral Practice? *Turkish Online Journal of Qualitative Inquiry*, 1, 2, 29-49.
- Tsiplakides, I., & Keramida, A. (2009). Helping Students Overcome Foreign Language Speaking Anxiety in the English classroom: Theoretical Issues and Practical Recommendations. *International Education Studies*, 2, 4, 39-44.
- Young, D. J. (1994). New directions in language anxiety research. In C. Klee (Ed.). *Faces in a Crowd: The Individual Learner in Multisection Courses*. Boston, MA. Heinle and Heinle Publishers.
- Zhao Na, (2007) A Study of High School Students' English Learning Anxiety; *The Asian EFL Journal*, Volume 9, Number 3, p: 22-34.
- Zreagat, M., & Kaur, S. (2014). Investigating Language Learning Autonomy and Foreign Language Classroom Anxiety among Jordanian EFL University Students. *Asian Journal of University Education* 8, (1), 1 – 24.



# A RESEARCH ON THE CURRENT PROBLEMATICS AND POSSIBLE SOLUTIONS OF ARCHITECTURAL DESIGN EDUCATION

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## Abstract

Recent research shows that the rapid changes in society, information technologies and the construction sector for the last two decades have also started a new transformation process in the discipline of architecture like other disciplines. In today's environment, where social and environmental responsibilities are discussed and architecture is defined as 'an intellectual energy field' with the 'black hole'<sup>1</sup> metaphor, the aim of architectural education, its structuring, and the consequences of globalization are being discussed. The past and the present structuring of architectural education demonstrate differences, especially under the titles of teacher-student relationship, quality of designing knowledge and transfer process, and the existence of critical thinking in education. Since the second half of the 20th century, critical attitudes to education-related issues have been expressed primarily by students, non-academic organizations, and finally, by critics within the academy. The aim of this study is to make proposals regarding the educational environments required for the mission of educating intellectual individuals in the light of these criticisms examined in relation to relationships, structuring and globalization. Constructing architectural education with consideration of criticism should help students not only to develop the skills, strategies and attitudes necessary for professional practice but also to complete their education as intellectuals who have learnt how to learn. The most critical problem on the agenda of architectural education is related with the transfer of methods of acquiring knowledge to architect candidates in a rapidly changing world. In this environment, architects must first discover ways of thinking which they can adapt to the changing circumstances. Reaching information and the consciousness of transforming it should precede the transfer of cliché information; creating experiential environments to educate architects who would be tolerant to complex problems and conditions should be the main motivation for educational reform in the 21<sup>st</sup> century world where contradictions, uncertainties and polyphonies are gradually becoming dominant. It is thought that the study which aims to develop a self-critical perspective within architectural design education will contribute to the development of design education.

## 1. Introduction

The issues related to education are among the titles which have long been taking place in theoretical debates are becoming increasingly popular. Especially since the second half of the 20th century, pedagogical debates have become one of the important tools in improving the discourse and practice of architecture. However, current research has highlighted the fact that exponential growth in information technology has caused a rapid change in society for the last 20 years whereas the pace of its impact on education has been rather low. When the current state of architectural education is examined, it is observed that the current problematics of architectural education is now on the agenda for debate as it could not adapt to the pace of change despite the fact that it differs from the educational structure of the past. The problematics of architectural education in question could be expressed as unification experienced together with accreditation processes and globalization, education expenses, inequalities in reaching the sources, beginner students without sufficient background, inadequate education environments, institutionalized universities which become prominent with commercial identities, the cliché and harsh pedagogical methods used in the design process, lack of practice and learning in education and the hierarchical order of teacher-student relationship. The construction of this research was designed to examine the existing problems that might be associated with these titles in architectural design education determined by theorists and to analyze the relation of the methods and structures currently used in design education to these problems. Identifying the problems and

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<sup>1</sup> Definitions of 'an intellectual energy field' and 'black hole' are included in the book 'Architecture: An Intellectual Energy Field' written by architects, theorists and academicians Ferhan Yürekli and Hülya Yürekli in 2004.

their causes is considered to be the first step of this study in developing alternative solutions. For this purpose, it is necessary to investigate the changes experienced in the components of architectural design education in historical continuity in order to be able to determine the current situation of architectural design education and the changes that it has experienced in the past so that future solutions to the possible problems of architectural design education could be proposed. Radical and alternative examples of design environments will be examined in light of the prominent concepts of the change and the criticism of theorists regarding current pedagogical approaches.

### 1.1. Objective, Scope and Methodology

This research has emerged as a result of the search for how experiential education environments could be established so that architecture students, who are considered to be multi-faceted intellectual individuals, could acquire skills such as design, creativity, criticality and productivity. The structure of the study was designed to investigate the existing problems in architectural design education detected by theorists and to determine the relation of the methods and structures currently used in design education to these problems and possible solutions. Within the scope of this study, different educational approaches were examined and then studio courses, which are the center of architectural education, were addressed with a speculative assessment in terms of methods and content.

### 2. The Evolution of Architectural Design Education: Historically Changing Components

Architecture education is structured differently from other educational sciences. This distinct structure basically stems from the discipline's own definition including the balance of art-technology-science, the fact that the discipline should be nurtured from many different fields of knowledge (Gökmen and Sürer, 2003), the centrality of studio courses where hands-on experience is practiced, and the uniqueness of the discipline which allows all the information acquired from different disciplines to be synthesized in these experiential settings (Lackney, 1999). Findeli (2001) affirms this unique educational structure while pointing out the fact that it is also possible to establish a similar experience-based educational system in other disciplines, as well.<sup>2</sup> As for Yürekli and Yürekli (2004, p.39) who have defined architecture education using the metaphor of the 'black hole', the changes of its past and present structure are described by the components given in Figure 1, namely, the flow of time acting on education, the purpose of architecture, supervision, quality of architect, education system, curriculum, field, nature and transfer of knowledge, quality of instructor and student, presence of historical interpretation and criticism.

In the historical analysis of Yürekli and Yürekli (2004, p.39) it is possible to see that the components of education changed considerably compared to the past. In the past, the quality of architects was characterized as the ability to produce masterful, stylistic works, and the knowledge of architecture limited construction information, and there was one-way transfer of knowledge to the students who were regarded as apprentices. However, it is stated that today, students are seen as partners and a multidisciplinary construct is required where knowledge is searched by the students and moderators together in a flexible program. An important difference between the architectural education of the past and today is the difference in developing critical thinking in education system. Critical thinking is a crucial component of the 21<sup>st</sup> century architectural design education. Therefore, architecture students are primarily expected to question the world, time, humanity and human beings they are involved with. This can only be achieved by the collaboration of social sciences and architecture where they can work together on common problematics, discuss, conflict, interact and create an environment for producing knowledge (Gürsel, 2001). Stern expressed the necessity of avoiding dogmatic tendencies in architectural education and stated that architectural students should be provided with contemporary data as much as possible to find their original ways. The most important lesson that students will learn in the history of architecture during this educational search process is that there are no true and false styles, only poorly understood or ungrasped constructions (Çağlar, 2009, p.4). When the teaching models in architectural design education are examined, radical differences are again noticed between the models that were applied in the past and those that are needed today. In their study which examined the learning process in architectural design education through four major learning theories of historical continuity, Yazar (2009, p.14) analyzed the effects of different approaches on designing. Of the Behavioral, Cognitive, Constructivist and Humanist learning models<sup>3</sup> discussed in this study, as found in the study of Yürekli and Yürekli (2004), Behavioral

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<sup>2</sup>In addition to the process-oriented approach, in his study where he proposes a holistic, systematic approach instead of problem-based design education, Findeli (2001) proposes the theories of visual intelligence and complexity where everything that exists is seen in relation to update architectural design education. Perhaps the most important part of this proposal is that for the first time in design education, the designer is not taken as a 'solution machine' looking at the problematic from a distance but a part of the system. With this approach, the design process is thought to be more effective since users, designers, and employers are located in the same interface, and therefore the construct in question is proposed as a model for other disciplines, as well.

<sup>3</sup>Yazar (2009) found the following conclusions regarding the four basic models of learning analyzed in their doctoral research: Behavioral Learning: Under the same conditions, everyone can equally learn every piece of

and Cognitive models (Watson, 1913, Pavlov, 1914), which are based on conditioning, rote learning and imitation and which assume students to be blank notebooks regardless of their personal differences, were dominant; Humanist and Constructivist models (Dewey, 1897; Kolb, 1984), which regarded learning as a mental process and where students determined their own mental models, did not ignore the cognitive and perceptual differences of participants and the fact that they carried the potential of liberating the design process models lead to the conclusion that these models are approaches that should be adopted by the contemporary architectural education environment.

	Architectural design education in the past	Architectural design education at present
<b>Time Flow</b>	Slow	Very Fast
<b>Purpose of Architecture</b>	Stylistic and typical Work	Modernity, Proposal
<b>Supervision</b>	Institutional	Free Mind + Intuitional Ethics
<b>Architect Quality</b>	Master	Scientist
<b>Educational System</b>	Beaux Art	University
<b>Curriculum</b>	Strict- Formal-Important	Changeable- Informal- Insignificant
<b>Field of Knowledge</b>	Technical or Aesthetic Discipline	Many Disciplines
<b>Quality of Knowledge</b>	Permanently Constructed	Temporary, Constructed or Not
<b>Transfer of Knowledge</b>	One-Way Transfer	Collaborative Research
<b>Quality of Instructor</b>	Practitioner Master	Theorist, Practitioner, Historian, Critic
<b>Quality of Student</b>	Apprentice	Partner
<b>Educational Setting</b>	School/Construction Field	School
<b>History</b>	To repeat	To take lessons
<b>Criticism</b>	None	Must

Table 1. Past and the Currently Changing Components of Architectural Education (Yürekli and Yürekli, 2004, p.39)

When the transformation of architectural education is examined, a radical break is observed which corresponds to the post-Cold War turn which can be dated to the second half of the 20<sup>th</sup> century, as noted by Beatriz Colomina (2012). In this period, when architectural education was first discussed by students, then by non-academics, and finally by the academy itself, and when the present problems were widely debated for the first time, the relation of architecture to capital and its authoritarian construct were criticized as it ignored real life; the discipline of architecture then started to relate its margins to the technological, socio-political and cultural domains of its time. The questionings in this period are considered to be the first self-criticism of architecture education in the academy. The questionings in which architects such as Daniel Libeskind, Robin Evans, David Leatherbarrow, Mohsen Mostafavi and Alberto Pérez-Gómez participated as students became informal components that changed the absolute construct of education, especially as a result of the search for alternatives in education.

knowledge. Perception and cognitive state are completely ignored. Cognitive Learning: Mental functions (thinking, understanding, problem solving, etc.) can be explained. Learning and memory are separate entities. Constructivist Learning: Learning is an active mental construction process. One must form his/her own mental model. Humanist Learning: Learning is a personal situation in which the person realizes his/her own potential. The focus of learning is to educate individuals who can make their own decisions.

### **3. Current Issues in Architectural Design Education**

Architectural education is a training in which the components related to designing are central. This is why it is generally the design education which is debated while architectural education is of question. In this study, the problems in architectural design process are addressed as the basic problematics of education. Taking into consideration the current architecture schools, problematics related to the structuring and purpose of architectural design education, the relationship between its actors, the uniformity of the accreditation processes are linked with studio courses.

#### **3.1 Issues Regarding the Purpose of Education**

The aim of architectural education differs in today's educational institutions in terms of teaching architecture, educating architects or intellectual individuals. Aydınli and Yücel (2015) underline the importance of the architect's education rather than architectural education in their study emphasizing the general classification of education. The most important variable at this point is related to accepting the student's different individual perception and taking the required role of facilitating the students' discovery of the ways in which they can build knowledge.

Çağlar and Aksu (2011) indicate that design education should not only provide students with architectural design competence but also qualification and excellence. While the architectural design competencies mentioned in this proposal are acquisitions related to the execution of the architectural profession which can be regarded as professional competence, qualification and excellence could be related with the characteristics such as critical thinking and creativity which intellectual individuals are expected to possess. Similarly, Yürekli and Yürekli (2004) argue that the purpose of architectural design education is to educate intellectual individuals, not professional people. Architectural theorist and critic Vidler (2004, p.13), on the other hand, emphasizes that a good school should encourage a way of thinking that can reveal the unknown by using the already known. What design education should take into consideration is how the designing process will work rather than what the product should be. The difficult and complex structure of design which is difficult to define hampers the learning and teaching of the design process. Although the experience, knowledge of the instructor and the tools and methods used to teach designing can vary at this stage, the active, creative and inquisitive participation of the student should be the main principle of design education (Dikmen, 2011). When today's architectural education is examined, we are confronted with the necessity of multi-voiced environments with different methods in order to acquire the competences expressed by the researchers who have been previously mentioned. Given the amount of information and its pace of change, it is clear that all the information architecture students will need after they complete their education cannot be gained during their education. For this reason, it is suggested that the mission of architecture schools in the 21<sup>st</sup> century should be to teach students the methods of learning design and that the definition of 'architect's education' should take priority over 'architectural education' (Yücel and Aydınli, 2015). Similarly, Teymur stated that the purpose of architectural education was to educate 'architects' before transferring architectural knowledge, but also emphasized that educating conscious and creative citizens was perhaps more important than educating architects. When the purpose of architectural education is reduced to purely architectural training, it is clear that both of these aims are unattainable (Teymur, 2001, p.78).

In the light of these definitions, the purpose of contemporary architectural education could be expressed as the training of intellectual individuals who have developed a high level of awareness, learnt how to learn and be critical, and that it could not be limited to raising professionals. In other words, the product of the studio, which is the center of design education, must be the architectural students themselves rather than the architectural project.

#### **3.2 Issues Regarding the Structuring of Education**

One of the problems related with the structuring of contemporary architectural design education is the single or multi-discipline problematic that varies among schools. It is a fact that, compared to the past, fields of knowledge come closer in the environment of the 21<sup>st</sup> century, also called the digital age, which brings about a search for inter-disciplinary or even trans-disciplinary productions and approaches. As for the discipline of architecture, this transition from a single to multi-disciplinary approach, its reflection to architectural education, exclusion of certain information and the simultaneous inclusion of tools from different fields of expertise in education is explained by Çağlar (2009, p.2) as follows: 'The waves created by this oscillation have almost reached our height. In the presence of our insecurity, there is also an increase in our efforts of compiling information from various disciplines, using untapped thoughts, employing unorthodox approaches based on creativity, producing new ideas and transferring

information from other fields when architecture is insufficient. Those who are engaged in architectural design education use this information as teaching tools in their studios which strengthens this view.” In addition to the interdisciplinary permeability expressed by Çağlar, Foqué (2008, p.11) expresses that architectural design is, in essence, innovative/ entrepreneurial, heuristic/experiential, and requires empathy and a holistic approach; the 21<sup>st</sup> century architect should deal with problems in different disciplines with fuzzy boundaries. Therefore, the competence of architects should encompass a broad spectrum including practitioner-expert, abstract-real, artistic-scientific, analytical-synthetic, individual-collective and product-process.

Another problem with education is related with the training of students in a construct which focuses on the result rather than the process. The fact that students are putting too much emphasis on being successful and that the final product comes before the learning process leads to the reduction of the skills they will gain by trial and error. This result-oriented, competitive environment leads to too much competition which is more than necessary in a learning environment and reduces the effectiveness of collective learning in design education (Colomina, 2012). The importance of holistic understanding and the systematic view which values the process as much as the final product is also expressed by Gasco (2008, p.37) by emphasizing the need to mature the components of the design process; observation, selection and synthesis, which are crucial in developing design. He also evaluated the design process as an experience and pointed to the fact that observation was the most important skill to achieve full success from this experience. Kurokawa (Aydinli, 2001) interprets the dualistic worldview of today's architectural environment and education as an illness of the times and as an alternative to this view, similar to Findeli (2001) and Gasco (2008) supports the concept of 'symbiosis' which includes a holistic viewpoint developed by 'both this and that' approach of architectural design education. In this context, it is emphasized that contemporary architectural education should combine the concepts of process and product, and that it should be structured in constructs where design, designer, and the design product are parts of the same interface.

### 3.3. Relations Between Actors in Education

The necessity of critical models in architectural education is indicated by researchers working on educational pedagogy (Buchanan, 2012). In order to develop critical models, it is essential to observe the participants in the model as well as the relationship dynamics of these participants. In architectural education, the actors of designing are instructors and students. According to Uluoğlu (1988, p: 22-23), the roles that instructors and students undertake are directly related to the aims of education: “Let us first look at how the student is trained. Will the student be educated as a building maker or a designer? If the aim is to be trained as a building maker, then the instructor will assume the role of the client and the student of the architect; the studio will be shaped by the injection of real-world conditions into education. On the other hand, if the aim is to educate designers, this will bring along a number of different approaches.” Uluoğlu (1988) analyses these approaches in two groups; one that evaluates the student as a *tabula rasa*, ignoring the knowledge and experience of the student and the other which presumes that the student is somehow informed and equipped; however the instructor has the mission of directing the student in the correct way and mobilizing this information. According to the approach where the student is considered a *tabula rasa*, the single source of knowledge required for the design action is the background of the instructor. However, this condition has started to change due to the increase in information technologies and the diversity of ways in which knowledge is acquired, especially, since the second half of the 20<sup>th</sup> century. This has led to the changing role of instructors from being the 'absolute true' to the facilitating mission of guiding the ways of reaching knowledge in design. While the traditional role of the instructor continues in many architectural schools, alternative pedagogical methods are also on the agenda. While the student is a passive receiver of information in traditional architectural design education, he becomes a design partner in these current approaches; he is involved in the design process not only by listening or imitating, but also by questioning. The studio, as the center of design education, has also become an experiential environment in which these active individuals collaboratively produce information. In another discourse, architectural education is activated as participants question design and theory. In parallel with this theory, architectural design studios create a problem-based context in which active learning takes place and students participate in groups or individually (Akıncitürk, et al., 2011). One of the important components of the design studio in architectural education is the verbal communication among its actors (Ruedi, 1996; Özdemir, 2013). Design process is, in a way, a process of understanding and questioning. The studio is a fascinating and poetic environment where learning is not limited to instructor-student but where students start learning from other students (Hejduk and Henderson, 1988).

Paul Freire's work on student-instructor dialectic is also of significance. Instead of the learning practices which Freire (2006) calls "banking model of education", which reinforces the silence culture, and where teachers and learners represent opposite poles, learners unconditionally memorize the information transferred, rendering them passive and taking them as an empty glass that has to be filled, a "liberating" education practice is proposed. In the banking education model, the information that the teacher transfers to the students is an abstract concept that has been decontextualized, categorized and not open to experience. Such abstract and decontextualized information cannot go beyond memorization and cannot be internalized as it does not integrate with the students' own life experiences. In this sense, the sustainability of information cannot be ensured (Sadri and Sadri, 2013). Instead of this limited education model, Freire (2006) proposes his "problem-posing method". This model, unlike the one-way transfer of abstract knowledge to the student, is an experiential understanding of the conditions of the world and the environment we are in. For this reason, instead of teaching-learning classifications in education, it proposes the concepts of moderator-participant. Unlike the banking model where information is a fixed object that has to be reached, this model presents information as a process which is open to constant change and transformation, and that can be influenced by participants. In this way, the educator continues to learn with the experiences of the students while the students become active participants of the learning process (Freire, 2006). According to Freire, "Knowledge emerges only through invention and re-invention, through the restless, impatient, continuing, hopeful inquiry human beings pursue in the world, with the world, and with each other." (Sadri and Sadri, 2013, p.5). In the experiential, innovative setting needed for architectural design education in the 21<sup>st</sup> century, unlike traditional structuring, the change in the dialogue and roles between student and instructor is one of the main factors. Yürekli (2004) interprets this change, which is a necessity of our age, by expressing that 'student is a partner'. In other words, the student is an individual who does not absorb the knowledge but who actively participates in its acquisition while the instructor is not the only source of knowledge but a participant who points to the methods of obtaining knowledge. Since Constructivists have discovered multiple ways; "The school has now become a meeting point where a free and experiential environment is established for the development of the study without the need for a master's guidance. Learning develops with the complexity of the finding. The school provides individuals with the opportunity not to monitor the changes but to give, receive and exchange since impulses are continuous" (Garcia 2009, p: 60).

### **3.4. Issues Related to Globalization and Accreditation Processes**

The process of globalization which has accelerated along with the development in communication channels today and dates back to the use of steam machines and the geographical discoveries in the 19<sup>th</sup> century deeply affects the discipline of architecture like many disciplines. Focusing on education instead of training in the architectural environment due to the standardization and ignorance of the local that came along with globalization are the basic arguments in the anti-globalization discourses. This standardization is the result of the auditing of certain organizations (UIA, ABET, EAAE, ECTS, NAAB etc.) in order to provide a pre-programmed standard in education from the learning period to the outputs. The negative effects of globalization on education have been mentioned by academicians and researchers as being occasionally obstructive to the flexibility of education; thus, eroding the original values in the system and causing imitation, dissociation and alienation (Gömleksiz and Kılınc, 2012).

When globalization is addressed in the context of architectural education, one of the outstanding criticisms is the contribution of the architectural environment to the vision-oriented structure aiming at producing images. Pinheiro (2009, p. 26) stated that in the globalizing world, architecture is a world of show, and architects are beginning to be seen as producers of images created with appetizing shapes and forms. Eisenman (Pinheiro, 2009) draws attention to the hyper-media culture that has spread all over the world and has also affected architecture; simple drawings with straight lines such as plans, cross-sections and facades are no longer sufficient to win a competition, beyond producing architecture. In architecture, the expected relationship between the piece and the whole is slowly being lost, and the space is lost in an image-dominant, show culture. In addition, as architecture becomes increasingly the product of image design technology, spatial components have begun to fall behind the facade design. Another criticism of the vision-oriented models in education is expressed by Garcia: 'The education of the architect is not rational, it should address the senses. Senses are not pragmatic like a building; they are complex and they add value to life. Architecture is not just an occupation; it is a way of life. It is a profession that turns into a necessity' (Garcia, 2009; p: 60).

## **4. Future: Possible Solutions**

The current criticism of architectural design education put forward by researchers is associated with the following headings; insufficiency to catch up with the contemporary, failure to take into consideration the differences of learners, inadequacy of intensive and multifaceted learning programs, failure to establish a holistic and critical view of the courses, disciplines and specializations, inability to create a participatory, non-didactic environment, focus on the product rather than the process, inability to develop the perceptual skills of the learner, failure to lay the foundation of lifelong learning, design education with a vision-oriented viewpoint and consequently the end product becoming dominant visual images (Ciravoğlu, et al., 2009, p.38). For this reason, it is thought that architectural design education in the future should be constructed within the framework of flexible structures in which current and experiential methods can be integrated. In these flexible processes, it is possible to apply constructivist and humanist education models that take into consideration the subjective, perceptual skills and differences of the learners. Training programs should be structured in a variety of ways that can provide students with different areas of specialization and development and their processes should be valued as much as the outputs. Since design education targets intellectual individuals, educational environments should be established where the expected critical thinking and creativity aspects of these individuals can be improved. For this purpose, it is proposed that among the actors of design education, the moderator-partner dynamic should replace the master-apprentice structure of the past. In constructs where education turns into a mental and subjective process rather than the focus on end product, the excessive competition among students will disappear and the conditions required for collective learning will be provided. In order to provide collective productions, design education programs should employ methods that would encourage a sense of belonging and collaboration. To avoid the standardization that came along with the globalization process, practices that integrate universal design values into local approaches and environments will be useful. In order to overcome the dominance of globalization and visual communication channels, vision-oriented practices should be avoided in education and approaches should be avoided from eye-centric applications in education, design approaches and tools of different disciplines as well as multisensory practices should be integrated to traditional design tools such as plan, cross-section and appearance. At this point, the positive impacts of globalization; namely, interdisciplinary or even transdisciplinary thinking and design approaches should be given more space in education. For this reason, as Joanne Pouzenc (2017) questions in the light of the arguments discussed above, architectural education needs to be reconsidered, free from certain patterns: "Maybe it is time to think of education as a moving framework that has the capacity to easily reinvent itself without endangering its structure. Maybe a school should be where you are. In that way, those practices serve as a solid foundation for a new reflection on the future of architectural education and moreover, on education at large." In the educational environment with the presence of all these criticisms and problems of architectural design education, perhaps, the first step to take for the future and continuity of education is to promote new pursuits and alternative voices in education.

## **5. Conclusion and Evaluation**

In order to bring together the results of the research on current architecture and architectural design education shared so far, it is seen that architectural education is a structure focused on architectural design education. In the past, architectural design education has been a structure in which the student has been in a passive position and the background of the instructor has been the only source from which knowledge could be obtained. In this structure, a result-oriented, project-based design studio model is used. In the studio, there is a one-way flow of criticism and knowledge from the instructor to the student. When the studio curriculum, which is the center of design education, is viewed, it is observed that there is a construct mostly including the dialectic of supply and demand. The aim of traditional design education is to train professional people who are not only nurtured by the practice of designing, but also by the knowledge that the architect should possess (Here, the knowledge referred to is the cliché knowledge acquired by that time). Therefore, architectural education has restricted its boundaries to the disciplines of architecture and construction. In education, there is a strict curriculum and a constant state of 'becoming knowledgeable' that has to be reached. When the architectural design education of the 21<sup>st</sup> century is examined, a pluralistic, interdisciplinary, or even transdisciplinary environment is observed. Furthermore, while the globalization trends provide positive contributions to design education such as the concepts of democracy and pluralism (Nalçakan, 2006, p: 35), they also develop unfavorable components such as the loss of locality and the inability of providing an environment for alternative voices due to the standardization and strict program limitations in education.



Today, the architectural environment is under the influence of an information flow which is rapidly changing and being transformed. For this reason, the aim of architectural education should be ensuring a construct where the present knowledge should be reached, transformed, synthesized and interpreted rather than undertaking the impossible task of transferring all the existing knowledge to the students. In this context, the purpose of architectural design education is to prepare an environment for life-long learning. Being critical of this many-voiced environment, and therefore the ability to question the present have also been included in the attributes that architects should possess. When the educational curriculum is examined, it is not possible to talk about a general construct despite the rapid globalization and accreditation processes.

As for the future condition of architectural design education, it is anticipated that it will be influenced by contemporary architectural discussions and transformations as in historical continuity. It is thought that design education will concentrate on the methods of obtaining information in parallel with the exponential growth of knowledge as well as providing students with design-related experiences. As architecture becomes an inter and transdisciplinary creative action, the use of alternative, disciplinary tools will increase in design education in addition to traditional design tools. The concepts addressed in contemporary theoretical debates such as experience, space, event design, human, body, time, movement, multi-sensory will be included in training programs, especially through studio design experiments, and flexible, experiential methods will be used in existing programs. It is thought that architectural design education will be enriched by experiential methods where the phenomenon of experience is addressed in the context of integration of design with life beyond drawing and creating images. Such a form of education is considered to be beneficial in bringing design studios to a unique and free position while providing architectural students with the sine qua non attributes such as alternative thinking, understanding and criticism.

## REFERENCES

- Akıncıtürk, N., Erbil, Y. and Yücel, Ç. (2011). Cooperative Learning In An Architectural Design Studio. *Uludağ Üniversitesi Mühendislik-Mimarlık Fakültesi Dergisi*, 16(2), pp.35-43.
- Aydınlı, S. (2001). Mimarlık Eğitiminde Değişen Öncelikler. *Mimarlar Odası İstanbul Şubesi Mimarist Dergisi*, 1, pp.116-120.
- Buchanan, P. (2012). The Big Rethink Part 9: Rethinking Architectural Education. *Architectural Review*. Retrieved: 12 March 2017, from <https://www.architectural-review.com/the-big-rethink/the-big-rethink-rethinking-architectural-education/8636035.article>.
- Ciravoğlu, A., Ökem, S., ve Akipek, F., (2009). Mimari Tasarım Eğitimi Üzerine Güncel Notlar: Kayıtdışı Tasarım Deneyimi. In: Ünver F.R., Polatoğlu Ç., Vural M., Düzgün H., (eds.), *Yıldız Teknik Üniversitesi Bütünleşme Ulusal Sempozyum Kitabı*. pp.37-47. İstanbul.
- Colomina, B., (2012). Architectural Review. (2012). *Radical Pedagogies in Architectural Education*. Viewed 12 March 2017, from <http://www.architectural-review.com/essays/radical-pedagogies-in-architectural-education/8636066.article>.
- Çağlar, N., (2009). 'Sunuş', *TMMOB Mimarlar Odası Ankara Şubesi Dergisi Dosya 15 Mimari Tasarım Eğitimi*. pp.2-4.
- Çağlar, N., Aksu, A. (2011). 'Mimari Tasarım Eğitiminde Sürdürülebilirlik: Mimari Tasarım Eğitimi Söylemleri:1 Manifesto'. *Mimarist Dergisi*, 41, pp.61-66.
- Dikmen, Ç.B. (2011). 'Mimarlık Eğitiminde Stüdyo Çalışmalarının Önemi: Temel Eğitim Stüdyoları', *e-Journal of New World Sciences Academy Engineering Sciences*, 6(4), pp.1509-1520. Viewed 12 March 2017, from <http://nwsa.dergipark.gov.tr/download/article-file/186197>
- Findeli, A. (2001). Rethinking Design Education for the 21st Century: Theoretical, Methodological, and Ethical Discussion. *Design Issues*, 17(1), pp.5-17.
- Foqué, R., (2008). 'Yetkinliklere Dayalı Yeterlilikler Sistemine Doğru', *TMMOB Mimarlar Odası Ankara Şubesi Dergisi Dosya 15: Mimari Tasarım Eğitimi*, p.11-15.
- Garcia, P. R., (2009). 'Kandisky Mimari Tasarımına Nasıl Yardım Etti', *TMMOB Mimarlar Odası Ankara Şubesi Dergisi Dosya: 15 Mimari Tasarım Eğitimi*, pp.60-63.
- Gasco, G., (2009). 'Tasarım Atölyelerini Deneyimlemek: Tasarımın Öteki Yüzü', *TMMOB Mimarlar Odası Ankara Şubesi Dergisi Dosya: 15 Mimari Tasarım Eğitimi*, pp.36-41.
- Gökmen, H., Süer, D., (2003). 'Sunuş', *Mimarlık Eğitiminde Tasarım Stüdyolarına Farklı Yaklaşımlar*, Mimarlar Odası İzmir Şubesi Yayınları, İzmir.
- Gömleksiz, M., N., Kılınc, H., H., (2012). 'Küreselleşmenin Eğitim Programları Üzerindeki Etkisine İlişkin Akademisyen Görüşleri: Nitel Bir Çalışma', *Mustafa Kemal University Journal of Social Sciences Institute* Vol. 9(17), pp. 397-413.
- Gürsel, Y., (2001). '21. Yüzyılda Mimarlık Eğitimi için Öneriler', *Mimarlar Odası İstanbul Şubesi Mimarist Dergisi*, 1, pp.86-91.
- Henderson R., Hedjuk J., (1988). *Education Of An Architect*. Rizzoli Publications, pp.297, New York.
- Lackney, A., J., (1999). *A History of the Studio-based Learning Model*. . Viewed 12 March 2017, from [http://www.edi.msstate.edu/work/pdf/history\\_studio\\_based\\_learning.pdf](http://www.edi.msstate.edu/work/pdf/history_studio_based_learning.pdf).
- Nalçakan, H., (2006). *Küreselleşen Dünyada Mimarlık Eğitimi Ve Türkiye*. Yayımlanmamış Yüksek Lisans Tezi, Yıldız Teknik Üniversitesi Fen Bilimleri Enstitüsü, İstanbul, Türkiye.
- Özdemir, E., E., (2013). *Mimarlık Eğitiminde Tasarım Sürecinin Geliştirilmesi Yönünde Bir Yöntem Arayışı*. Yayımlanmamış Mimarlık Doktora Tezi, Gazi Üniversitesi, Ankara, Türkiye.
- Pinheiro, V., (2009). 'Yeni bir kimliğe doğru: Bir pedagojik deneyim', *TMMOB Mimarlar Odası Ankara Şubesi Dergisi Dosya: 15 Mimari Tasarım Eğitimi*, pp.26-28.
- Pouzenc, J., (2017). What's Wrong with Academia? On Alternative Schools of Architecture. *Architect*. Viewed 13 March 2017, from <http://architect.com/features/article/149995822/what-s-wrong-with-academia-on-alternative-schools-of-architecture>.
- Sadri, H.Zeybekoğlu Sadri, (2013). 'Liberating Architectural Education', *Critical Pedagogy*, 28, pp.60-66.
- Teymur, N., (2001). 'Mimarlık Eğitimi ve Mesleğin Geleceği', *Mimarlar Odası İstanbul Şubesi Mimarist Dergisi*, vol. 1, pp.78-80.
- Uluoğlu, B., (1988). 'Mimari Tasarım Stüdyosuna Bir Bakış', *Planlama Dergisi*, 88(2), pp.21-25.
- Vidler A., Wigley, M., (2004). 'Architectural Education – the Information and the Argument', *Architectural Design: Back to School* 74(5), pp.13-23.

- Yazar, T., (2009). *Mimari Tasarım Stüdyolarında Sayısal Egzersizler*, Yayınlanmamış Doktora Tezi, Yıldız Teknik Üniversitesi Fen Bilimleri Enstitüsü, İstanbul, Türkiye.
- Yücel, S., Aydın, S. (2015). 'Mimarın Eğitimi' Üzerine Spekülatif Bir Deneme', *Erciyes Üniversitesi Fen Bilimleri Enstitüsü Dergisi*, 31(1), pp.17-23.
- Yürekli, H. and Yürekli, F. (2004). *Mimarlık Bir Entelektüel Enerji Alanı*. 1st ed. Yapı Endüstri Merkezi. İstanbul.

# EFFECTIVENESS OF SOCIAL MEDIA IN TEACHING AND LEARNING

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**Abstract**—In recent years, social networking sites have been used extensively for personalization, socializing with friends and other people having similar interests. With the growing use of social media in day to day life, its use in education is no exception. An evolving trend in the traditional learning environment needs to integrate such media so as to make it useful for learning purposes. However, to what extent these social networking sites can be beneficial in the teaching and learning process is still under question. To address this, a survey was conducted to explore the usage of social media by the undergraduate students of University of Hail, Saudi Arabia. The main aim was to measure the extent to which the students use these social sites, to determine their purpose of using such sites and to evaluate the effectiveness of social networking sites in learning. An analysis had been done as a result of survey to get students' perceptions regarding usefulness of these sites for their learning.

**Keywords**— *Social media, learning and teaching, higher education, survey.*

## INTRODUCTION

Social networks can be referred to as online sites or platforms who build social relations by connecting people with similar interests. People can register to these sites by making their profile and providing preferences. In the recent years, social networking sites became very popular media for communication.

They turn out to be modern means of interactive communication allowing people to stay in touch with each other[8][9][10]. People can share their experience, ideas, exchange messages, media files and other interesting information. Such sites are multipurpose for example can be used for political campaigns, social issues, business advertisements and sports to name a few. With internet it is now possible to reach huge number of audience worldwide. According to [11][18], among the various communication media like radio, television, internet, social networking site such as Facebook came up to be the fastest media (12 months) to have largest number of users i.e. 200 million. With this quick and far reaching impact, it is vital to utilize social media sites for educational purposes.

The purpose of this study is to:

1. Determine usage of social networking sites by the students.
2. Explore the purpose of such sites by the students.
3. Evaluate the effectiveness of social media in learning from students' point of view.

The rest of the paper is organized as follows. Section II discuss the literature review and provide details of some commonly used social media. The details of the survey are mentioned in section III. Section IV discusses the analysis and results of the study. The paper is concluded in section V.

## background study

With evolving trends in traditional teaching methods, it is necessary that the teachers should opt new technologies to make the learning process innovative. One of the main reasons is the frequent use of digital media. Furthermore, the widespread use of social networking sites has bridged the communication gap. It serves as an effective tool to share information, video or audio content and making friends. While the main purpose of such sites was socializing, but with the passage of time, it is evolving and being used in a variety of ways including the education field. It has been observed globally that many colleges and Universities are utilizing

social media for a variety of purposes like to reach general community, advertise various events, attract prospective students and also to establish relationships between alumni and current students. One of the major reasons for opting social media is its ease of use and access. Various studies have shown that social media's use in education has increased than before. It mentions that adopting social media along with traditional teaching strategies can be more beneficial and provide more room for revolutionizing the current educational setup. [12][13][14][15][16][17].

Many social networking sites are widely used in a number of ways. Figure. 1. shows various sites. Below we will discuss some of the most common social media sites.

#### Facebook

It is frequently used social media used for teaching and learning in higher education. There are a lot of feasibility options to build frequently virtual connections as an educational tool. Some of these options like closed groups are used to make discussion and posts the lecture notes, assessments and announcements. Also it is allowed to make a video live session to explain the lecture and take comments and reply to them. Actually it will be the same traditional classroom but using facebook will be virtually an online classroom. It is particularly shared with the usage of portable digital devices such as mobile phones and tablets PCs. It has ensured that universities are becoming increasingly interested in the extent to which social media offers opportunities for improving student engagement [1].

Facebook is considered as the superlative social networking site with a lot of users that have individual or grouped account. The wide spread and flexibility of use of facebook in life will be its main reason to be used in education domain. The brief characteristics of facebook are: social interaction, broadcasting personal information, filtering by person rather than content, focus on individuals and groups.

#### Twitter

It is pretty remarkable tool to lend the excited, interested and amazing touch to education domain. Twitter makes two simple tasks possible: 1) Users can post short, 140-character messages which are referred as tweets. 2) It also facilitate the user to follow the messages posted by others. The feasibility of using Twitter is little bit different from other social media. The main control of twitter chats depend on hashtag (#) on what you want to chat to someone. If the instructor spread the outline of the material on his/her account, all the students can follow him/her and chats on. Sharing the material helps the instructor to keep online classroom with all information that will be consuming within a class. It is a mutually beneficial process of both sides that will help them to save their time. Twitter gives various benefits like: microblogging, topical posts, short format, awareness of audience and content by hash-tags [2].

#### Instagram

It is an online photo or video sharing and social networking service. Teachers can use Instagram to share information and connect with students, parents and other educators and the students can follow them. This technology encourages the students to engage in the class work through creative announcements of assignments, quizzes or exams to give them more explanation on them as a motivated way. Also it makes easy for instructor to give the students outline of lecture before lecture time to be aware of the topic. The brief usage of Instagram is as follows: send classroom notifications, show case students work, review content from class, track student progress for whole semester, encourage and engage students, share keynotes of each class lecture notes and recommendations [2].

### Snapchat

It is a new technology of photo messaging application that allows users to take photos, record videos, add text and drawings, and send to their friends. Snapchat uses the term of stories that can be uploaded on it. Snapchat can be leveraged to classrooms and students to join with students and families. There are a lot of ideas which can incorporate Snapchat in classroom as education such as vocabulary assignments, deliver feedback from students, announcements or lecture explanation. The main characteristic of Snapchat is that it distinguish it from other social media is to add funny intelligence that pays attention to the students to concentrate on videos and photos which are uploaded on story. So, it makes it easy for students to push a little knowledge as a video or photo when they are not in class and easier to hold information than it is in classroom [4].

### YouTube

It is an online virtual platform that allows billions of people to discover, to watch and to share originally-created videos which acts as a distribution platform for original content educators and advertisers( large and small). YouTube uses the terms of channel to establish video session, allow other communities to watch them, write comments and subscribe to register in the channel. It will show all video directly in this way. So the instructor can upload all lecture notes explanation and use this channel for teaching a specific course online. Also the students can cooperate with video through writing comments. This way it engages the students in digital education to be interactive and interested and learn from other communities. Sometimes the nature of course needs to be implemented using videos to clearly explain the course theories [5].

### Google+

It is unique virtual collaborative social media which has some distinguished features. It is a portal with any Google application like Google drive, YouTube, Gmail and so on. Google+ has discrimination features that helped its widespread usage in education. The terms that it uses includes: circles, hangout, sparks, pages, and stream. Circles allow the user to establish a labeled group such as family, friends, and course name; for example the instructor can make a group of each classroom to share something specific for it. So what you share among specific group will not be visible to other groups. Hangouts allow you send messages and make video calls on different devices to several different people at the same time, so the instructor can respond to all students' queries if they are joining with him/her. Sparks allow you to show the list of your favorite fields that you are interested in as videos, photos, articles that will save your time. Pages are useful to organize your work as Facebook social media based on the subject of the group. Stream is a friend list posting, so you can see what your friends are posting. Besides the education students can run directly to the instructor name and follow the posts as (+1) button. The features of circles and spark let this platform more controlling and convenient to use it especially in education [6].



## Methodology and Questions

Sr. No.	Site	Purpose
1.	<a href="#">Facebook</a>	Social Networking site for sharing information, making friends.
2.	<a href="#">Google Plus</a>	Sharing messages, video conference and photographs.
3.	<a href="#">YouTube</a>	Web site for sharing media/videos.
4.	<a href="#">Twitter</a>	Blog allowing users to send character messages.
5.	<a href="#">Linked In</a>	Social site for building professional profile. Useful for job seeking.
6.	<a href="#">Flickr</a>	Photo sharing site.
7.	<a href="#">Wordpress</a>	Blogging platform.
8.	<a href="#">Slideshare</a>	Site for presentation sharing
9.	<a href="#">Wikipedia</a>	Online encyclopedia providing information on various topics
10.	<a href="#">Pinterest</a>	Virtual pin board allowing you to share note containing text, video

## Participants and Context

## Data Collection

Data was collected from the student questionnaire designed to collect student's perspective of using social media and its educational effectiveness. The survey comprised of 15 questions divided into choice based, open ended and scale based questions.



### survey results and analysis

A total of 100 students answered the questionnaire. From the results it was clear that most of the students are using multiple social network sites. Statistics for frequently used social sites are shown in Table 2 and Figure.2.

On being asked about the average time spent on using social media most students respond (50%) that they use it for 4 to 7 hours on a daily basis. The purpose of use by most students turned out to be either sharing information (50%) or for study (40%). Statistics are shown in Fig.3 and Fig.4 respectively.

Sites	Percentage Use
Twitter	20%
Instagram	25%
Face book	25%
You Tube	30%

Table 2. Frequently used social networks sites by students

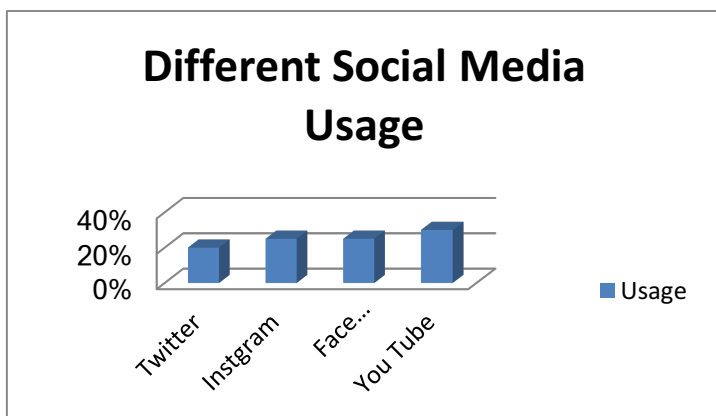


Figure.2. Different social media usage

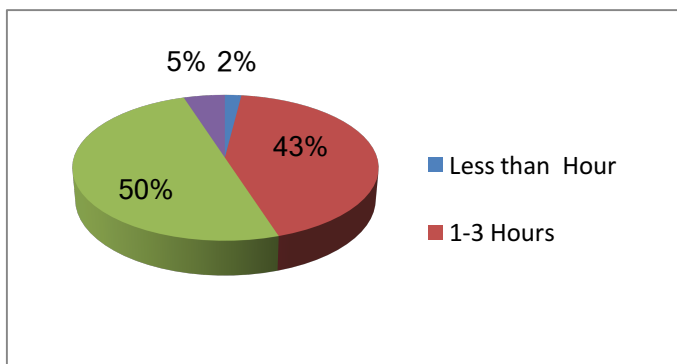


Figure.3. Average daily use of networking sites

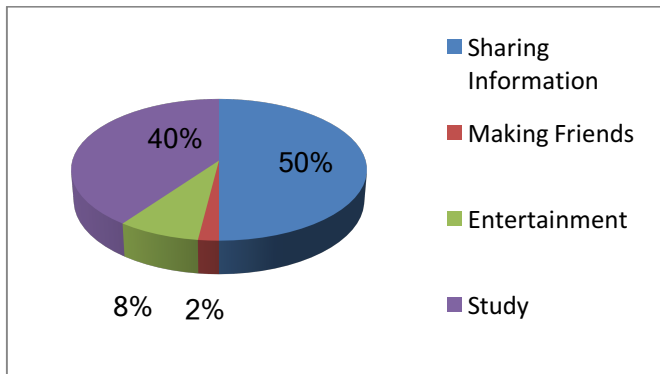


Figure.4. Purpose of using networking sites

The students were asked can social media be opted by teachers as a tool. Most of them strongly agreed to it(47%) as shown in Figure.5.

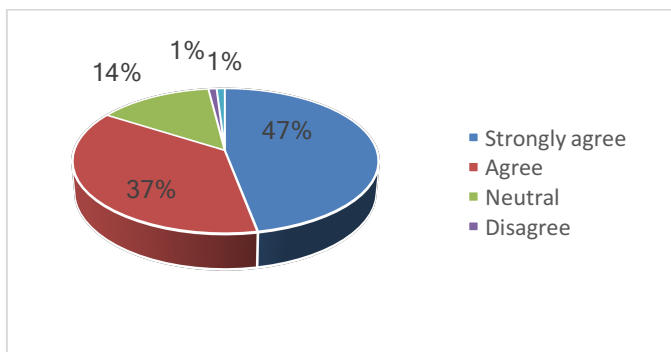


Figure.5. Adoption of Social Media as a teaching tool

Furthermore, 51% of the students agreed that they use social media for communication with their teachers. In another question regarding to ease in sharing of information by social media, the response was positive (42%).Approximate equal percentage of students agreed that social media can be helpful in learning online and in research activities as well as seen in Figure.6. and Figure.7.

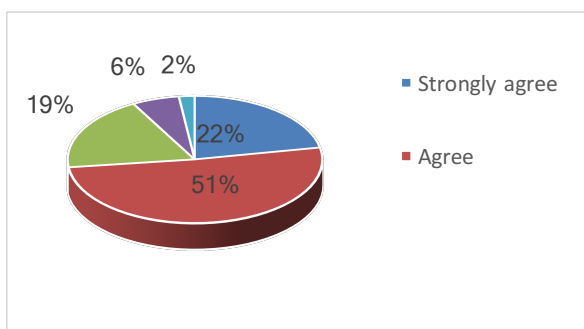


Figure.6. Social Media in communication

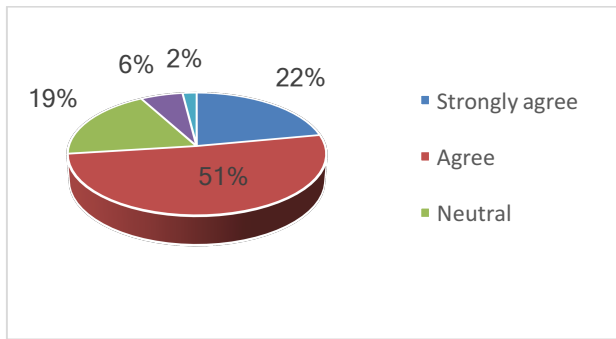


Figure.7. Online learning by social media

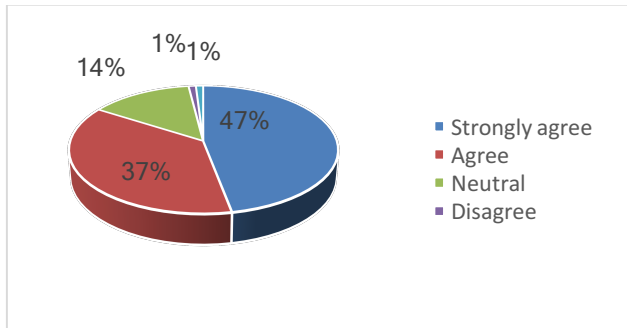


Figure.8. Social media for research

## RECOMMENDATIONS AND CONCLUSIONS

Social media widespread use has made it a necessity for everyday life. Its use in socializing, job seeking, advertising, information sharing is increasing day by day. Considering its global access and far reaching impacts, it is necessary to utilize this platform for learning purposes. It can turn out to be a useful alternative to face-face communication and can be very beneficial. In order to evaluate its effectiveness in learning, a survey was conducted among the undergraduate students of University of Hail. The results of the survey were encouraging and gave positive feedback regarding students' perception of using social networking sites for online learning, group discussions and communication with faculty etc.

## REFERENCES

- [1] Wise, L. Z., Jason Skues, and Benedict Williams. "Facebook in higher education promotes social but not academic engagement." Changing demands, changing directions. Proceedings ascilite Hobart (2011): 1332-1342.
- [2] A. C. and G. D., "The Usage Characteristics of Twitter in the Learning Process," Interdisciplinary Journal of E-Learning and Learning Objects , vol. 8, pp. 149–163, 2012
- [3] L. Watanabe-Crockett, "10 Ways To Use Instagram In Your Classroom," in *globaldigitalcitizen.org*, 2015. [Online]. Available: <https://globaldigitalcitizen.org/10-ways-to-use-instagram-in-your-classroom>. Accessed: Jan. 02, 2017.
- [4] Charteris, J., Gregory, S., Masters, Y., Maple, M., & Kennedy, A. (2016, November). Snapchat at school – "Now you see it...": Networked affect – cyber bullying, harassment and sexting. University of South Australia.

- [5] N. Buzzetto-More, "Student Attitudes Towards The Integration Of YouTube In Online, Hybrid, And Web-Assisted Courses: An Examination Of The Impact Of Course Modality On Perception," *MERLOT Journal of Online Learning and Teaching*, vol. 11, no. 1, pp. 55–73, Mar. 2015.
- [6] C. Clark, N. Strudler, and K. Grove, "I See You: Using the Affordances of Google+ to Increase Social and Teaching Presence in an Online Undergraduate Teacher Education Course," in *ISTE*, San Antonio, TX, 2013, pp. 1–33.
- [7] Dabbagh, Nada, and Anastasia Kitsantas. "Personal Learning Environments, social media, and self-regulated learning: A natural formula for connecting formal and informal learning." *The Internet and higher education* 15.1 (2012): 3-8.
- [8] Reuben, Rachel. "The use of social media in higher education for marketing and communications: A guide for professionals in higher education." (2008).
- [9] VanDoorn, George, and Antoinette A. Eklund. "Face to Facebook: Social Media and the Learning and Teaching Potential of Symmetrical, Synchronous Communication." *Journal of University Teaching and Learning Practice* 10.1 (2013).
- [10] Tur, Gemma, and Victoria I. Marín. "Enhancing learning with the social media: student teachers' perceptions on Twitter in a debate activity." *Journal of New Approaches in Educational Research* 4.1 (2015): 46.
- [11] Eke, Helen N., and Nneka Jennifer Odoh. "The Use of Social Networking Sites among the Undergraduate Students of University of Nigeria, Nsukka." *Library Philosophy and Practice* (2014).
- [12] Bexheti, Lejla A., Burim E. Ismaili, and Betim H. Cico. "An analysis of social media usage in teaching and learning: The case of SEEU." *Proceedings of the 2014 International Conference on Circuits, Systems, Signal Processing, Communications and Computers*. 2014.
- [13] Redecker, Christine. "Review of learning 2.0 practices: study on the impact of web 2.0 innovations of education and training in Europe." (2009).
- [14] Center for Marketing Research. (2013, September 15). Social Media Research. [Online]. Available:  
<http://www.umassd.edu/cmr/socialmediaresearch/>
- [15] Costache, Monica. "Qualman, Eric.(2009) *Socialnomics: how social media transforms the way we live and do business*. John Wiley & Sons, New Jersey." *Journal of Comparative Research in Anthropology and Sociology* 1.1: 225-228.
- [16] B. Alexander, A. Levine. "Web 2.0 Storytelling: Emergence of a New Genre." *EDUCAUSE Review*, vol. 43, no. 6. November/December 2008.
- [17] C.Redecker, K. Ala-Mutka and Y. Learning 2.0 - The Impact of Social Media on Learning in Europe. Institute for Prospective technological Studies.
- [18] Awake! "What should you know about social networking?" (2012, February) *Awake*, 3-9. Awake, (2011, July). What Should I know social networking? Part 1, pp. 24.25.



# DETERMINANTS OF PRIMARY SCHOOL NONATTENDANCE AMONG CHILDREN IN NORTH WEST NIGERIA

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## Abstract

This paper presents a study to investigate the effects of children, household and contextual factors on primary school non-attendance among children in North West Nigeria. This is to ascertain the factors that are responsible for the high rate of primary school nonattendance as well as increase in the number of out-of-school children in the region. The study uses a nationally representative dataset, the Nigerian Education Data Survey (NEDS 2010) collected by USAID, Nigerian Population Commission, and the Universal Basic Education to investigate how children, household and contextual factors affect primary school non-attendance among children. Initially, the study uses a comprehensive theoretical framework to understand how factors from different and nested levels affect children primary schooling in North West Nigeria. The data pertaining to the area under study are extracted from the NEDS 2010 dataset and prepared for analysis. The study then uses multilevel analysis to hierarchically examine the effects of children, household and contextual factors on primary school non-attendance in North West Nigeria. The analysis initially estimates the direct effect of each variable, then the effects of varying some factors across households was also examined. The results of the multilevel analysis show that most of the strong determinants of primary school nonattendance are due to household characteristics, with parental education and wealth being most important. The results further show that parental education and wealth also affects the influence of other factors across children, household and contextual levels. The results also show that distance to school has more influence on primary school non-attendance among contextual factors.

## 1 Introduction

Education is generally recognized as an important determinant of human capital that provides better opportunities to enhance the life of an individual (Backer, 1999). The importance of educating children at an early stage helps in improving the economy of a country due to increasing level of literacy among individuals. However, most children are not given the opportunity of having a good quality education especially in many developing countries. There are programmes that were established by some developing countries in order to improve access to quality education, such as the Universal Primary Education (UPE) and Universal Basic Education (UBE) programmes in Nigeria (UBE, 2010). These aimed at providing free and universal basic education to the citizens irrespective of age, gender and socio-economic status. However studies have shown that there are about 10.5 million out-of-school children in Nigeria (UNICEF, 2013), and 60% of the children are in the Northern part of the country (NPC, 2010; ESSPIN, 2011). This characterises the region with lower literacy and educational attainments and wider gender gap in educational attainment than the other region.

Furthermore, among the six geopolitical zones of Nigeria (North Central, North East, North West, South East, South South and South West), the North West region has 30% of the total number of primary schools in Nigeria, although one of the reasons for the disparity might be demographic in nature (UBE, 2012). This makes the region to have the highest number of primary schools in the country. Also, the North West region has 28% of the number of primary pupil intake in the country in 2012 (UBE, 2012). Despite the North West region of Nigeria having the largest number of primary schools and pupil intake, the region is lagging behind in terms of primary schooling. The North West region is characterised by higher teacher/pupil ratio of 1:44, a gender parity of 0.71, higher level of unqualified teachers and higher number of out-of-school children than other regions (UBE, 2012). Also, there are disparities in the number of out-of-school children across states (Jigawa, Kaduna, Kano, Katsina, Kebbi, Sokoto and Zamfara) in North West region of Nigeria (UNICEF, 2013). The percentages of out-of-school children in Jigawa, Kaduna, Kano, Katsina, Kebbi, Sokoto and Zamfara are 62%, 23%, 40%, 55%, 69%, 65% and 76% respectively. Thus more than 50% of the children in Jigawa, Katsina, Kebbi, Sokoto and Zamfara are not attending school. The five states and Kano also have higher number of out-of-school children than a national average value of 30% while Kaduna State has relatively lower population of out-of-school children.

Studies have been conducted to determine the factors that affect children's education in Northern Nigeria (Kazeem et al., 2010; Antoninis, 2014), however, the existence of large disparity in the number of out-of-school children between North West and other regions of Nigeria needs to be explored. The household and contextual characteristics of the region can be examined to determine their effects on the non-attendance of children to primary schools across the region despite having the largest number of primary schools in the country. Thus, it is desirable to investigate the effects of children, household and contextual characteristics on the non-attendance of children to primary school in North West Nigeria. The aim is to identify the main factors that

This paper presents an analysis conducted to determine the chances of primary school nonattendance among children using the Nigeria Education Data Survey (NEDS) 2010 dataset (NPC, 2010). The analysis uses multilevel models to enable the estimation of factors at children, household and contextual levels that affects primary schooling in North West Nigeria.

## **2 Theoretical Framework**

A framework has been developed to simultaneously examine and understand the effects of factors at children and households within the context of the study on primary school nonattendance. Figure 1 shows the framework comprising group of factors in different hierarchies with their expected effect on non-attendance to primary school. Non-attendance is placed at centre of the concentric circles, which is embedded within multiple layers. The innermost layer shows the effects of child characteristics on primary school nonattendance. The child characteristics are embedded within household characteristics and therefore affected by the household characteristics, then everything is enclosed in contextual characteristics. School quality are rather included in household effects because they were collected in the NEDS 2010 dataset based on parental perception rather than direct measurements from the schools.

### **2.1 Child Characteristics**

Child gender plays a role in parental decision-making when it comes to children's schooling, because most parents tend to give preference to gender by favouring boys over girls within the same household (Huisman and Smits, 2013). For the former, this is due to weighing the availability of labour force for women after school completion and in most cases as a result of cultural norms within the context of the household. Additionally, in societies where the perceived benefit of girl's schooling is very low, girls are kept at home to learn skills like cooking, housekeeping and child care, which will enable them to become successful housewives, as prescribed by the cultural norms in the societies (Ota and Moffatt, 2007). Some societies also have the perception that girls after marriage often live in the families of their husbands and therefore parents may prefer to invest in the education of boys especially if the girls are having a higher number of brothers (Huisman and Smits, 2009). Furthermore, children age also influences parental decision-making when investing in children's education because parents give preference to younger siblings over older siblings (Emerson and Souza, 2002). This is because the older children do the household chores, work in farm or contribute to the household income by earning some extra money in order to provide opportunities for younger children to attend school (Estudillo et al., 2009). However, other studies have shown that the negative effect of large number of siblings on the schooling of older children in a household does not always hold in every family and society (Huisman et al., 2010). Besides gender and age, the presence or absence of parents also influence decision-making to invest in children's education. Parents tend to give more priority to their children when it comes to schooling, which increases the chances of not attending school by non-biological children (Kate et al., 2015).

### **2.2 Household Characteristics**

Household characteristics that may influence parental decision when sending children to school are household wealth, parental education, parental perception, culture/religion and whether parents are present in a household. During the period of schooling, the income generated by a child to the household is less than when the child is not in school (Basu, 1999). Thus, in making decision to invest in children's education, parents put into consideration the direct and indirect cost of school and the opportunity cost forgone when the child is in school (Huisman and Smits, 2015). Generally, parents weigh off the future benefits of sending their children to school against the immediate costs. The benefits are for the children and also for the parents themselves when they grow old or after retirement (Huisman and Smits, 2012). As for parental level of education, children that are from more educated households are more likely to attend and stay in school (Huisman and Smits, 2012). This is because parents who have reached a certain level of education are expected to support their children to reach at least the same level (Johnston et al., 2015). Therefore, it is expected that parents with higher levels of education tend to support higher levels of educational participation for their children. Additionally, mother's level of education also plays an important role on educational enrolment of girls (Johnston et al., 2015).

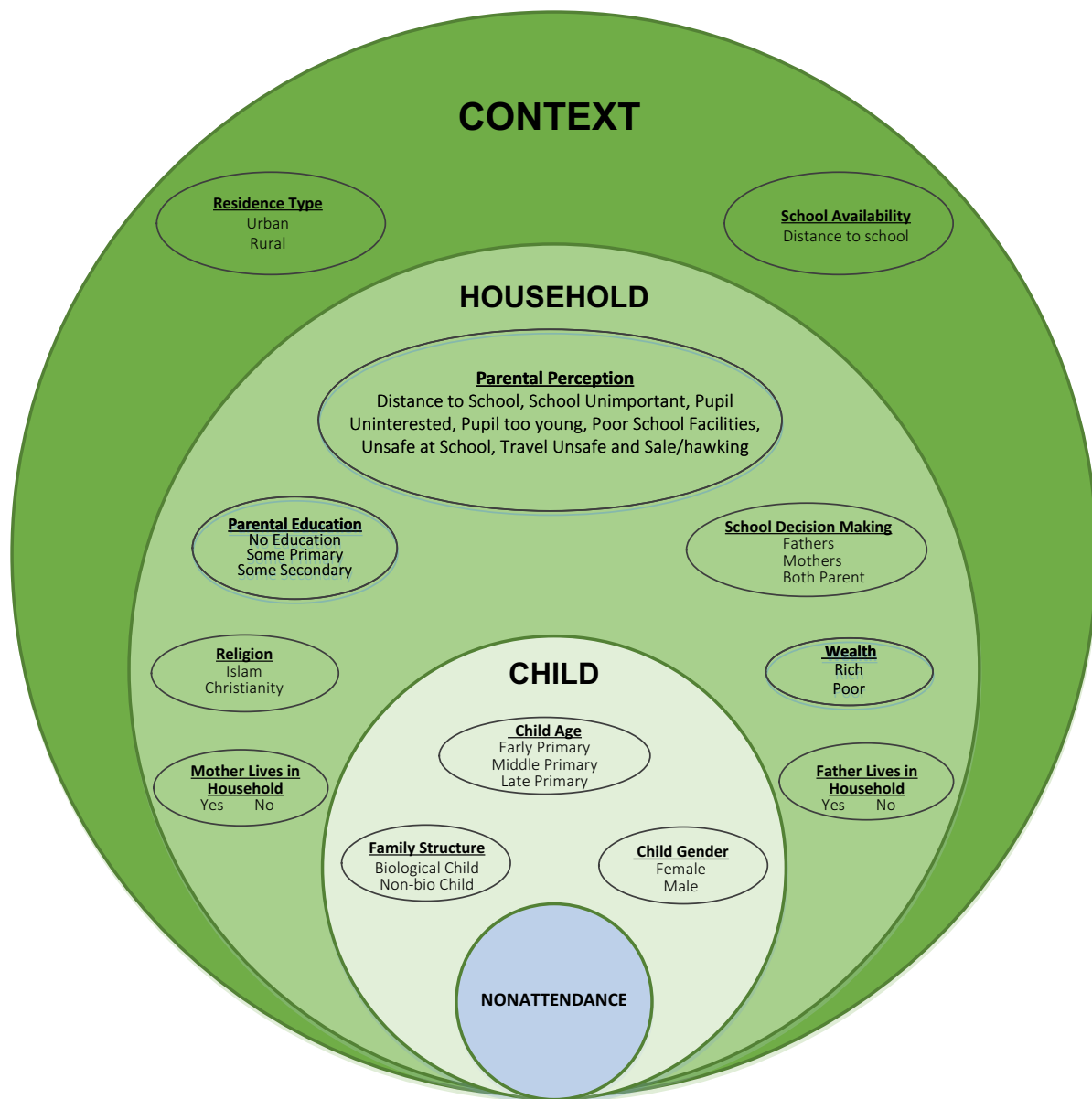


Figure 1. A model predicting primary school nonattendance as influenced by children, household and contextual characteristics

Besides household wealth and parental level of education, culture may also be a determinant of sending children to school. Studies have shown that culture creates female subordination especially in areas with patriarchal system. In these areas, patriarchy prescribes the role of a female in society as a wife and mother (Shahidul, 2013). Patriarchal societies are also mostly found in places where religions are dominating, and thus they are often seen as using religion in discriminating against women thereby creating huge gender inequalities. Furthermore, the investment of parent in the education of their daughters may also depends on the marriage traditions of their societies. For instance, in societies where girls tend to marry into the families of their husbands, parents may be less willing to invest in their education, because the returns to this investment go to the husband's family (Smits and Gündüz-Hosgör, 2006). Also in some part of Northern Nigeria, girls are prevented from attending school because their households and families believe that formal education interferes with the traditional way of life (Kazeem et al., 2014), which favours the education of boys more than girls. Children with missing parents are also educationally disadvantaged for several reasons such as increased poverty, psychological trauma, and the need to assume adult livelihood/caregiving responsibilities (Kidman et al., 2012).

Longer distance to nearest school might negatively affect children's education. The negative effect of longer distance to nearest school is more likely to be severe on the education of girls due to safety concerns especially when a girl reaches puberty (Mingat, 2007), thereby causing gender inequality in children's education. Furthermore, school quality determines whether parent will invest in their children's education. Parents often realize that their children gain more from higher quality education and are therefore more willing to send them to school when they perceive the quality of education to be better (Colclough et al., 2000). Several quality



indicators have been accredited with a negative impact on educational attainment, such as poor school facilities, under-qualified teachers and teacher absence (Leach, 2006).

### 2.3 Contextual Characteristics

Contextual factors such as residence type and distance to the nearest school are important determinants of children's primary education. With regards to residence type, rural parents mainly work in subsistence farming and as such they may not see the value of investing in their children's education because there are no job opportunities within their local labour market (Huisman and Smits, 2009). In addition, rural parents in some developing nations perceive that formal schooling may lead to the out-migration of their children to urban places (Lakin and Gasperini, 2003). However, in urban areas, there are employment opportunities that encourage parents to send their children to school. Urban areas also have adequate and good roads and transport infrastructure that are better than those in rural areas, which facilitates access to schools thereby influencing urban parents to send their children to school more than their rural counterpart (Lewis and Lockheed, 2006).

### 3 Variables and Method

The data for North West Nigeria are extracted from the NEDS 2010 dataset (NPC, 2010). The data comprises 7,390 primary school children aged 6-11 years across 823 households in the region, with 3,689 girls, and 3,701 boys. The response is a dummy variable indicating whether a child is attending (0) or not attending (1) primary school. At the children level, the independent variables used are age, gender and family structure. Primary school age (6 to 11 year olds) is measured as early primary (0), middle primary (1) and late primary (3) for 6-7 year olds, 8-9 year olds and 10 to 11 year olds respectively. Family structure is a dummy variable measured as biological child (0) or non-biological child (1). At the household and context level, parental education is measured as no education (0), some primary (1) and some secondary (2). Household wealth is measured as low (0), middle (1) and high (2) quintiles. Religion is measured as Islam (0) and Christianity (1). Parental survivorship (father alive, father live in household) is measured as yes (0) or no (1). School decision making is measured as father (0) or both parents (1). Parental perception regarding distance to school, travel to school unsafe, children unsafe at school, poor school facilities, child not interesting, child too young and sale/hawking are measured as yes (0) or no (1). Household location is measured as rural (0) or urban (1) and distance to the nearest primary school is measured as less than one kilometre (0) and one kilometre and above (1). The categories measured as (0) are used as reference category for their relevant variables.

The method of estimation used to determine the effects of factors at children, household and context levels is a two-level multilevel model for children nested in households across the North West Nigeria as presented modelled in equation 1.

$$\text{logit}\{P_r (N_{ij} = 1 | x_{ij}, \delta_j)\} = \beta_0 + \beta_1 X_{1ij} + \beta_2 X_{2ij} + \dots + \beta_n X_j + \delta_j \quad (1)$$

where  $N_{ij}$  is the response,  $X_{ij}$  are the set of child, household and contextual characteristics and  $\delta_j$  is the household random intercept. The analysis also determine the effect of wealth and parental education when they vary across household as modelled in equation 2.

$$\text{logit}\{P_r (N_{ij} = 1 | x_{ij}, \delta_j)\} = \beta_0 + \beta_1 X_{1ij} + \beta_2 X_{2ij} + \dots + \beta_n X_j + \delta_{1j} + \delta_{2j} \quad (2)$$

where  $\delta_{1j}$ ,  $\delta_{2j}$  are the random effects for parental education and wealth.

### 4 Results

Figure 2 presents the percentages of primary age children (6 to 11 year olds) that are not attending primary school in North West Nigeria based on children and some household and contextual characteristics.

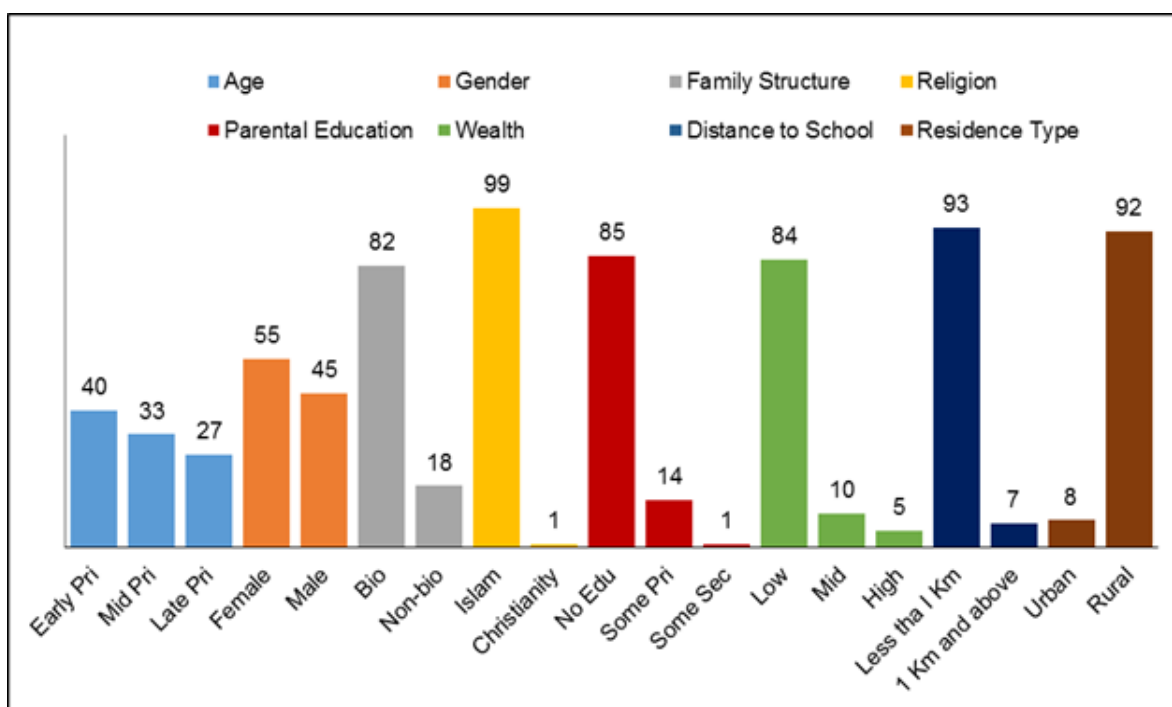


Figure 2: Percentages of children not attending primary school in North West Nigeria

Table 1 presents the coefficients (B) and odd ratios (Exp (B)) of the multilevel logistic regression analysis conducted. The estimations was conducted using four different models. An initial model was developed that includes children, household and contextual covariates (Model 1). The estimate was conducted with wealth and parental education and both as random covariates (Models 2, 3 and 4 respectively).

#### 4.1 Fixed Effects

Model 1 controls for all the children, household and contextual characteristics with an estimated inter-class correlation coefficient (ICC) of 36%, which is the proportion of the total variance that can be attributed to the households. The results for children characteristics showed that there is a negative association between the likelihood of non-attendance of boys, which is also similar for older primary age children (8 to 11 year olds). This shows that girls and younger primary age children are more likely not to attendance primary school in North West Nigeria. The factors at household and contextual level also influence primary school non-attendance in different ways. The results showed a likelihood of primary school non-attendance among Muslim children than their Christian counterpart, although this might be due to significantly higher population of Muslims in North West Nigeria. With regards to wealth and parental education, there is a negative association between children from low wealth quintile or having parents with some level of education and primary school non-attendance. Therefore in line with other research findings, children in North West Nigeria are also more likely not to attend primary school if they have uneducated parents or come from low wealth quintile. For parental perception, parents who perceived that it is unsafe for their children to travel to primary school and teachers perform poorly will likely not send their children to primary school. However, parental perception for school distance, unsafe at school, poor school facility, pupil uninterested, pupil too young and sales/hawking do not influence primary school non-attendance. It should be noted that not having a father in household or being a non-biological child do not influence the likelihood of primary school non-attendance. For contextual characteristics, the results showed a negative association between urban children and primary school non-attendance. Children living one kilometre or higher from nearest primary school are also more likely not to attend primary school.

Variables	Model 1		Model 2		Model 3		Model 4	
	B	Exp(B)	B	Exp(B)	B	Exp(B)	B	Exp(B)
<b>Children Characteristics</b>								
Gender = Male	-0.60**	0.55	-0.60**	0.55	-0.61**	0.54	-0.59**	0.55
Age = Late Primary	-0.58**	0.56	-0.55**	0.58	-0.60**	0.55	-0.55**	0.58
Age = Mid Primary	-0.53**	0.59	-0.50**	0.61	-0.56**	0.57	-0.51**	0.60
Non-biological Child	0.09	1.09	0.13	1.14	0.10	1.11	0.12	1.12
<b>Household Characteristics</b>								
Religion = Christianity	-2.09**	0.12	-2.51**	0.08	-2.20	0.11	-2.69**	0.07
Parental Education								
Some Secondary	-2.07**	0.13			-0.65**	0.52		
Some Primary	-1.35**	0.26			-0.62**	0.54		
Wealth = High	-1.59**	0.20	-2.03**	0.13				
Wealth = Middle	-0.97**	0.38	-1.09**	0.34				
Father lives in HH = No	-0.37*	0.69	-0.37*	0.69	-0.39*	0.68	-0.41*	0.66
Parental Perception								
Distance = No	0.12	1.13	0.11	1.12	0.07	1.07	0.03	1.03
Travel Safety = No	-0.40**	0.67	-0.40**	0.67	-0.43**	0.65	-0.40**	0.67
Poor teacher performance = No	-0.55**	0.58	-0.59**	0.56	-0.58**	0.56	-0.61**	0.54
Unsafe at school = No	0.40*	1.49	0.43*	1.54	0.40*	1.49	0.42*	1.53
Poor facility = No	0.02	1.02	0.01	1.01	0.03	1.04	0.00	1.00
Pupil uninterested = No	0.33*	1.38	0.31*	1.37	0.35**	1.42	0.32*	1.37
Pupil Too Young = No	0.22*	1.25	0.21*	1.23	0.22*	1.24	0.21*	1.24
Sales and Hawking = No	0.20*	1.22	0.17*	1.19	0.17*	1.19	0.15	1.16
<b>Contextual Characteristics</b>								
Residence type = Urban	-0.17	0.85	-0.24	0.78	-0.92**	0.40	-1.27**	0.28
Distance to sch. = 1 Km +	0.97**	2.64	1.13**	3.09	1.09**	2.97	1.24**	3.47
<b>Log Likelihood</b>	32061		31440		31726		31169	
<b>ICC</b>	0.36		0.50		0.52		0.61	
<b>Number of Observations</b>	7390		7390		7390		7390	

\*p < 0.05, \*\*p < 0.01.

Table 1. Coefficients add odds of multilevel logistic regression models with nonattendance as dependent variable.

#### 4.2 Random effects for Wealth and Parental Education

The analysis also examined the effect of varying parental education across households in Model 2. The estimated ICC increased from 36% to 50% and 52% after varying parental education and wealth across households respectively. The increase in the variances can be attributed to the households. The effect of varying parental education reduces the odd ratios of children from Christian households from 12% to 8% and that of children in the high wealth quintile from 20% and 13%. The effect also reduced the odd ratio of urban children from 85% to 78% and increases the likelihood of not attending primary school by children living farther from school (from 2.64 to 3.09). These show that proportions of the decrease and increase observed are due to influence of uneducated parents no primary school non-attendance. Similarly, the effect of varying wealth quintile across households (Model 3) reduced the odd ratio of urban children from 85% to 45% and increase the odd ratio of parents with some primary and secondary education to 54% and 52% respectively. These also show that the proportion of the increase and decrease is due to children in low wealth quintile. Furthermore, varying wealth quintile and parental education across households (Model 4) significantly increased the ICC to 61% and reduced the odd ratios of children from Christian family and those in urban area. Generally, varying wealth and parental education has little effects on the influence of children characteristics and parental perception on primary school non-attendance in North West Nigeria.

#### 5 Conclusion

A multilevel analysis was conducted to determine the effects of factors at children, household and context levels that influence primary school non-attendance among 7390 children across 823 households in North West

Nigeria. Children were nested in households to examine the direct effect of their explanatory factors on primary school nonattendance in North West Nigeria.

The direct effects of children characteristics showed that gender has influence on the likelihood of not attending primary school among girls than boys. The outcome also indicated that child age influence the likelihood of not sending younger children to primary school. These findings are consistent with previous research studies (Kazeem et al., 2010; Antoninis, 2014; and Huisman and Smits, 2009) that reported gender and age as determinants of primary schooling among children in Northern Nigeria. The possible reason is parents in North West Nigeria have low perception regarding the benefits of educating girls because girl child after marriage will be living with their husbands' family, which has less or no investment return on the parents when they are old. Another possible explanation is that some parents consider girl education as depriving girls from getting the necessary domestics skills needed for being successful housewives based on their cultural practices. However, the findings showed that not having a father in household or being a non-biological child do not negatively affects the likelihood of primary schooling in North West Nigeria. Thus, gender and age are the main children factors that influence the likelihood of not attending primary school in North West Nigeria.

The household and contextual factors also have different levels of influences on primary school non-attendance. The effect of religion showed that Muslim children are more likely not to attend primary than their Christian counterpart in the region under study, which is possibly due the high population of Muslims in North West Nigeria and therefore having more population of Muslim children not in primary school as shown in Figure 2. The findings also showed that having uneducated parents or being in the low wealth quintile strongly influence the chances of not attending primary school in North West Nigeria. For uneducated parents, the possible reason is due to their inability to attain any level of education, as such they do not have the awareness of the value of education and therefore exert little or no effort in educating their children. For the effect of wealth, the findings indicated that parents in the low wealth quintile will likely not send their children to school. Additionally, the findings showed that rural children and those living farther from a nearest primary school are more likely not to attend primary school. Similarly, parents also perceived that it is unsafe to send children to primary school, which also increases the chances of not attending primary school. The possible explanation for these effects is, although education should be free for all children, parents in the low wealth quintile that are mainly living in rural areas and farther from a nearest primary school, cannot bear the cost of transportation and therefore not willing to send their children to school due to distance.

The combined effects of wealth and distance to school for rural parents also make them not willing to send their children to primary school due to safety concerns while traveling, which tends to have more severe effect on girls and younger children. This is because varying wealth across households significantly reduces the chances of not attending primary school by urban children (from 85% to 40%) compared to their rural counterparts, and increases the chances of not attending primary school by children living farther from school. Furthermore, after varying parental education and wealth together (Model 4), the chances of not attending primary school by urban children significantly decreased by 33% and the chances of not attending school by children living farther from primary school increased by 76%. The effects of varying both parental education and wealth also reduces the chances of not attending primary school by children from Christian households by 58%. Thus, parental education, wealth and availability of school are strong determinant of primary schooling among household and contextual factors.

Generally, the findings suggest that children's age and gender, parental level of education, wealth and availability of schools within close proximity are the main determinants of primary school non-attendance in North West Nigeria. The findings also indicated that parental education and wealth affects how children and contextual factors influence primary school non-attendance in North West Nigeria. This means that having educated parents and more wealth have the potentials to significantly reduce the rate of primary school non-attendance. In addition, having more schools closer to communities particular in rural areas will also further reduce the rate of primary school nonattendance irrespective of children's gender and age. Finally, the overall findings have shown that educating people about the benefit of education and having primary school closer to communities will have great impact on reducing the rate of primary school non-attendance.

## REFERENCES

- Antoninis, M. 2014. Tackling the Largest Global Education Challenge? Secular and Religious Education in Northern Nigeria. *World Development*, 59, 82-92.
- Basu, Kaushik. 1999. "Child Labor: Cause, Consequence, and Cure, With Remarks on International Labor Standards." *Journal of Economic Literature*, 37(3): 1083-1119
- Becker, G.S. 1999. *Human Capital: A Theoretical and Empirical Analysis, With Special Reference to Education*. University Of Chicago Press.
- Colclough, C., Rose, P. and Tembon, M. 2000. Gender Inequalities in Primary Schooling: The Roles of Poverty and Adverse Cultural Practice. *International Journal of Educational Development*, 20(1), 5-27.
- ESSPIN 2012. Annual Report 2011-2012. Report Number: Esspin 058 Accessed from <https://Www.Esspin.Org/Reports/.../341-File-Esspin-Annual-Report2011-2012.Pd>
- EFA 2014. *Teaching and Learning: Achieving Quality For All*. UNESCO.
- Erikson, R., Goldthorpe, J., Jackson, M., Yaish, M., and Cox, D. 2005. On Class Differentials in Educational Attainment. *Proceedings of the National Academy of Sciences of the United States of America*, 102(27), 9730-9733.
- Estudillo, J. P., Sawada, Y., and Otsuka, K. 2009. The changing determinants of schooling investments: evidence from villages in the Philippines, 1985–89 and 2002–04. *The Journal of Development Studies*, 45(3), 391-411.
- Hampshire, K., Porter, G., Agblorti, S., Robson, E., Munthali, A., and Abane, A. 2015. Context matters: Fostering, orphanhood and schooling in sub-Saharan Africa. *Journal of biosocial science*, 47(02), 141-164.
- Huisman, J. and Smits, J., 2009. Effects of Household and District-Level Factors on Primary School Enrolment in 30 Developing Countries. *World Development*, 37(1), 179-193.
- Huisman, J., Rani, U. and Smits, J. 2010. School Characteristics, Socio-Economic Status and Culture as Determinants of Primary School Enrolment in India. Nice Working Paper 10-109. Institute for Management Research Radboud University Nijmegen.
- Huisman, J. and J. Smits 2015. Keeping Children in School: Household and District-Level Determinants of School Dropout in 322 Districts of 30 Developing Countries. *Sage Open*, October-December, 1-15
- Johnston, D.W. and Shields, S.C.K.M.A. 2015. Who Makes The Financial Decisions? Intra-Household Evidence from Panel Data.
- Kazeem, A., Jensen, L. and Stokes, C.S. 2010. School Attendance in Nigeria: Understanding the Impact and Intersection of Gender, Urban-Rural Residence and Socioeconomic Status. *Comparative Education Review*, 54(2), P.295.
- Kidman, R., Hanley, J. A., Foster, G., Subramanian, S. V. and Heymann, S. J. 2012. 'Educational Disparities In Aids-Affected Communities: Does Orphanhood Confer Unique Vulnerability?' *The Journal of Development Studies*, 48, 531-548.
- Lakin, M., and Gasperini, L. 2003. Basic education in rural areas: status, issues, and prospects. *Education for Rural Development: Towards New Policy Responses*, FAO/UNESCO. Leach, Fiona 2006. "Researching Gender Violence in Schools." *World Development* 34: 1129-1147.
- Lewis Maureen A, Lockheed Marlaire E. 2006. *Inexcusable Absence: Why 60 Million Girls Still Aren't In School and What To Do about It*. Washington, DC: United Book Press
- Mingat, A. 2007. Social disparities in education in sub-Saharan African countries. In *International studies in educational inequality, theory and policy* (pp. 223-255). Springer Netherlands.
- NPC (National Population Commission). 2010. *Nigeria Education Data Survey*. Abuja, Nigeria: National Population Commission.
- Ota, M., Moffatt, P.G. 2007. The Within-Household Schooling Decision: A Study of Children in Rural Andhra Pradesh. *Journal of Population Economics* 20: 223-239.
- Shahidul, S. M. 2013. Mothers' Participation in the Household Decision and Daughters' Education. Working Paper Series No.7. Centre for the Study Of Social Stratification and Inequality (CSSI), Japan.
- Smits, J. and A. Gündüz-Hosgör. 2006. Effects of Family Background Characteristics on Educational Participation in Turkey. *International Journal of Educational Development*, 26, 545-560.
- Smits, J. and J. Huisman. 2013. Determinants of Educational Participation and Gender Differences in Education in Six Arab Countries. *Acta Sociologica*, 56(4), 325-346.
- Universal Basic Education, 2012. *Primary School Enrolments by States*. Abuja, Nigeria: Universal Basic Education Commission.
- UNICEF 2013. *The State of the World's Children*. New York.

# LANGUAGE ARGUMENTATION IN WRITING CLASS

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## Abstract

Language argumentation has always been neglected in the field of media discourse. In (2013), I conducted a research, as part of my PhD thesis, investigating the use of language argumentative strategies in newspaper editorials. The study revealed that many and diverse language strategies are actually used. One of the recommendations which I suggested was to include the teaching of language strategies in the university writing class. I and my colleague conducted a research to investigate this possibility. Two groups of my university students were involved in this study : an experimental and a control group. The experimental group received instruction on language argumentation while the control group had the usual instruction on how to write an argumentative essay. The purpose was to find out whether the subjects in the experimental group would provide a more convincing, effective, and better quality essays (by using these strategies) than the subjects in the control group. The results revealed that argumentative language instruction had their own effects to some extent by the experimental group using five out of seven argumentative strategies selected for the study with more frequency than the control group.

**Keywords:** language argumentation- rhetorical devices- persuasive

## Introduction

Language argumentation or using language to produce stronger arguments has always been neglected in the field of media discourse. In (2013), I conducted a research study, as part of my PhD these, to investigate the use of language as an argumentative strategy in Moroccan newspapers editorials. The study focused on one popular editorial/column published daily in a newspaper called 'Almassae'. The results revealed that many and diverse language strategies have actually been used in that editorial. One of the suggested future recommendations in my thesis was to include the teaching of language argumentation in the classroom, specifically for first year university students whose program includes 'argumentative essay writing'. Together with my colleague I tried to investigate this possibility.

The rationale behind that was that I have always been interested in English teaching and finding ways to improve it. Furthermore, writing in general and specifically essay writing is still kind of a heavy task for both teachers and students because of its complexity as a skill, and one of the most difficult writing types is argumentative essays. Thus, we considered the probability that we can ameliorate teaching writing by adding language strategies instructions to the course, so the students will be capable of producing stronger arguments and hopefully better argumentative essays. To investigate this idea, we came up with the following research questions:

## Research Questions and Hypotheses

1. Will first year university students in the experimental group use more language argumentative strategies in their argumentative essays than in the control group?
2. Will the taught language argumentative strategies help first year university students in the experimental group produce stronger arguments than in the control group?

This leads to the formulation of the following research hypotheses:

1. First year university students in the experimental group will use more argumentative strategies in their argumentative essays than in the control group.
2. First year university students in the experimental group will produce argumentative essays with stronger arguments than the students in the control group.

To answer these questions we went through the following steps.

## The Methodological Framework

The methodological framework chosen for this study was both quantitative and qualitative. For the first research question, it seems to be quantitative in the sense that the more essays we get, the better we will notice the effect of language argumentation instructions. For the second research question, the approach is qualitative because it is based on comparing the essays of the experimental and control groups to evaluate the ways in which arguments are formulated in terms of language expressions.

## Population

The sample participating in this research includes my students in ENCG. It is a superior school of commerce and marketing. They are first year students divided into six sub-groups. Each sub-group (class) involves forty to fifty students. The total number is 232 including 86 males and 146 females. They are aged between 17 and 19 years old. As for their English language background and level, they are all similar levels because having access to this school requires good marks in economy subjects plus languages in baccalaureate. Furthermore, they have to pass an entrance exam including testing in English, in addition to other economy subjects, in order to be enrolled. Students in Morocco usually start studying English in primary school in private education or Junior high school in public education.

## Research Instruments

In order to answer the first research question, seven language argumentative strategies have been chosen:

**Questions:** They include two types. The first type involves questions used in the introduction usually as 'hooks' to attract the readers' attention. The second type is rhetorical questions and they are used to emphasize one's opinion and may not be answered because their rhetorical function is to ask them. They may also be used to blame, (Mustapha in Hassana 2008). Sahri (2010: 85) states that these questions are the most effective linguistic expressions in argumentation. For Pearlman (in Toulba 2010: 197), questions have an important role in argumentation because a question requires a topic through which a possible agreement is expected and answering this question comes to emphasize this agreement.

**Denial and Exception:** suggested by Azzaoui (2010: 64), they involve words like (just) and (except). Denial specifically was considered by Pearlman (in Toulba 2010: 197) as having an important argumentative role. The same idea is supported in Wikipedia (2009) and Bouquerra (2005).

**It is+evaluative adjective+ that/to:** It is a rhetorical device suggested by Morley (2004) used in quality and popular British newspaper editorials.

**Adverbs:** there are a lot of adverbs and adverbials that have been suggested as argumentative strategies. That is why, I chose only the adverb form '-----ly' which the subjects are already familiar with; in addition, Morley (2004: 10) states that they are the most relevant type of adverbs in argumentation. Toulmin (1958: 13) mentions that adverbs that end in -----ly are usually used to comment or to express the writer's attitude when they are in the context or argumentation.

**Suasive verbs:** They are verbs which show the extent to which the writer tries to convince the reader with the desirability or probability of an event. Suasive verbs such as: agree, arrange, beg command, decide, insist, and propose usually carry power in them expressing the attitude of the writer. Suasive verbs were suggested by (Westin and Geisler 2002) as argumentative strategies.

**Conditional:** They are clauses that mark the conditions needed for an event to or not to take place. Abbadi (2002: 6), Wikipedia (2009), Pearlman (in Toulba 2010: 197), and Ideam (1994:5) suggested that conditional can be used as an argumentative strategy, and that includes all the conditional types in English.

**Concession:** Abbadi (2002) suggested concessive adverbials as argumentative strategies. Examples include 'in spite of', 'even though', etc.

These strategies have been selected from my PhD Research (2013) thesis which includes around 46 language strategies in total. All were empirically proved to be argumentative strategies by prior research. The choice of the seven language strategies in the present research was based on the following: First, they are used in the English language since English is the taught language. They are language strategies used in English/ Arabic as I found out in my PhD research (2003). Second, time constraints allowed me to provide only one session for reviewing the structure of argumentative essays and introducing the language strategies. Students have a syllabus to follow for the term. Prior exposure both in Arabic grammar and English grammar in high school seems to be necessary in order to control the variable of no familiarity with the argumentative strategies that might intervene with the short time given to language strategy instruction. Familiarity with the language expressions would help the students use the strategies in writing with no much difficulty.

## Procedure for Data Retrieval

The sample included the six sub-groups I teach. They were divided randomly into two groups, an experimental group and a control group. Each sub-group was instructed separately in the usual class timing. The total number of the subjects in the control group was 111 while the experimental group involved 121. Both groups had one session of two hour instruction on revising the basics of the argumentative essay in terms of content and structure, supposing that they were taught that in high school. Thus, the subjects were given a detailed description of the thesis statement (what it is made of and where it is usually positioned in the essay). In addition, the subjects were instructed on how the flow or arguments go through in the essay (strong and weak arguments, arguments for and against, etc). The instructions were followed by a number of exercises and activities to check the subjects' understanding. The experimental group was introduced to the selected language argumentative strategies with definitions and examples of sentences with and without these strategies. They

were asked to compare these sentences to check the strength of these strategies in making the argument look more influential.

At the end, the subjects in both groups were told they were going to write an argumentative essay the following week with topics of my own suggestion. The subjects in the experimental group were told they were going to be visually exposed to the language strategies they were introduced to while writing their essays, and that they were supposed to use some of them.

The selected topics were of a big interest and importance to the life of students related to the system of education or to their family life as teenagers. This way I was quite certain the subjects would have enough background knowledge to include.

When the essays were gathered, the data was manually retrieved in two steps. First, the argumentative strategies were identified in each essay for both groups, and then counted for the number of times they appeared in the essays. Each argumentative strategy was counted alone like the number of adverbs used in all essays. The aim was to make the comparison between the frequency use of each strategy for the experimental and the control groups. Second, the argumentative strategies were counted in each essay in order to make it easy to get the mean values and run the independent t-test. The essays were coded as numbers 1,2,3 etc, along with the number of strategies found in each.

For the second research question: how to evaluate the quality of the essays in terms of arguments strength through language argumentation, my colleague took chunks of the essays in both groups to make the comparison. It was important to have a second view for a more objective evaluation of the essays.

#### **Procedure for Statistical Analysis: Independent T test**

The procedure used to statistically analyze the collected data was the independent sample t-test, or the independent t-test which compares the means between unrelated groups. It is used to determine whether there is a statistically significant difference between those means. The model assumes a difference in the mean score of the dependent variable which are the groups in this case, and the independent variable which is the language argumentation instruction. Furthermore, the independent t-test is usually run on participants who are randomly selected, and which is the case for the present research: The subjects were randomly assigned to a control and an experimental group.

The computer software program used to analyze the collected data is the SPSS. It is defined by Wimmer and Dominick (1997: 390) as 'a statistical software package designed specifically to analyze social research data'. The SPSS is a popular statistical tool known for its efficiency and precision for the results. SPSS seems to fulfill the validity purpose of the present research in the sense of allowing the possibility to run the independent t-test.

#### **Results Description:**

The first thing to have been noticed in the results is that the subjects in the control group also used the language argumentation in spite of not being instructed to do so. The table below illustrates this idea:

	Control Group	Experimental Group
Valid	111	121
Missing	0	0
Mean	7.80	9.34
Median	7.0	9.0
Mode	7.0	9.0

Table 1: The Mean value of Argumentative Strategies used in the Control and Experimental Group

Table one presents the mean value calculated for each group. The experimental group used more argumentative strategies with 9.34 mean value which is just little higher than that of the control group: 7.80. However, and since the number of the subjects in the experimental group is a little bigger than in the control group, with 10 additional subjects, it seemed more efficient to compare the frequencies of each strategy appearance for both groups as the following table illustrates:

Argumentative Strategies	Control Group	Experimental Group
Adverbs	332	364
Suasive Verbs	74	127
Conditional	113	179
Concession	37	67
Questions	141	118
Denial/Exception	145	114
It's + Evaluative Adjective	31	85

Table 2: Frequency Use of Language Argumentative Strategies for the Control and the Experimental Groups



The table above presents the number of times each of the argumentative strategies has been used for both groups. At a first glance, the numbers reveal that the most frequently used strategies are: adverbs with 364 for the experimental group and 332 for the control group. There is also denial and exception device with 145 for the control group and 114 for the experimental group. Then, there are questions for which the control group scored 141 and 118 for the experimental group; and there is finally conditional with 113 for the control group and 179 for the experimental group.

As for the less frequently used devices, there is: suasive verbs with 74 times for the control group and 127 times for the experimental group. There is also concession with a frequency of 37 times for the control group and 67 for the experimental group. There is finally evaluative adjectives 31 times for the control group and 85 for the experimental group.

The numbers also reveal that 5 out of 7 argumentative strategies used by the subjects scored higher frequency use for the experimental group than the control group: They include adverbs, suatives, conditional, concession and It's+ evaluative adjectives. This most probably means that instructions on language argumentation had their effects on the subjects, as an answer to the first research question; or that the testing of the first research hypothesis has more positive than negative outcome, in the sense that for denial and exception, and questions, the subjects in the control group used them more frequently with 145 and 141, respectively than the subjects in the experimental group with 114 and 118.

In order to confirm this result, the independent t-test was run on the data:

#### Group Statistics

	STRATEGIES	N	Mean	Std. Deviation	Std. Error Mean
GROUP	1,00	3	1,33333	,577350	,333333
	2,00	4	1,50000	,577350	,288675

	Leven's test for equality of variance		t-test for Equality of Means						
Equal variance assumed	F ,357	Sig ,576	T -,378	Df 5	Sig (2-tailed) ,721	Mean difference -,166	Std error difference ,440	95% confidence interval difference Lower upper -1,3 ,96	
Equal variances not assumed			-,378	4,455	,723	-,166	,440	-1,3	1

Table 3: Independent T-test for the control and Experimental Groups

The table shows that the comparison between the control and the experimental groups is significant with 0.7. Since this value is more than 0.5 it can be considered as significant, in spite of the 10 additional subjects in the experimental group.

As for the second hypothesis concerning the evaluation of the quality of language argumentation used in the essays, It is obvious that these argumentative devices help students express strong arguments and opinions in a firm and strong manner such as I strongly believe, I highly believe, I command, I'm sure, ... They tend to convince audience through the merit and reasonableness of the claims and proofs offered.

Also, from the presence of these devices, students are able to write clear arguments. They become conscious of how rhetoric works can transform their writing, making them more successful and able communicators and more discerning audiences.

Through argument writing, students tend to present a position and have their readers adopt or at least seriously consider their arguments. While reading these essays, they reflect a serious attempt on the writer's part to have considered the issue from all angles, and to have analyzed and synthesized all arguments on the subject, and having done so, chosen the most logical and reasoned position.

Observing such a variable word class gives us the opportunity to observe variability in students' language development. How they choose adverbs, the semantic classes they prefer, and where they place them in

sentences gives us valuable insight into their language proficiency. (it's undoubtful, it's crystal clear, it's crucial, it is heatedly debated, incredibly, it's salient to notice...

However, in a few essays we find that the use of rhetorical devices is superficial. This means that students are aware of the importance of these devices but they still need to learn more about their use. Some of these devices are irrelevant and they are used just to convince the reader/teacher that they are aware of their importance in writing. In general, a thorough reading of the essays proves that all the argumentative strategies taught were well used in the samples analyzed.

As a conclusion, the results somewhat confirm the testing of the first hypothesis since five out of seven rhetorical devices were more frequently used by the subjects in the experimental group. In addition, some rhetorical devices were more frequently used than others regardless of the comparison between the control and experimental group. Furthermore, and in spite of the fact that the control group did not receive instructions on language argumentation, the subjects used pretty a huge number of rhetorical devices. These conclusions will be thoroughly interpreted in the next section.

### **Results Interpretation**

The first result to be interpreted concerns the reason why adverbs, denial/exception, questions, conditional are more frequently used than suasives, concession and it is + evaluative adjective. The second result concerns the argumentative strategies used more by the experimental group and which involve adverbs, suasives, conditional, concession and it is + evaluative adjectives.

As stated in the result section, all the rhetorical devices chosen for the present study fulfill the criteria of familiarity on the part of the subjects. Thus, one possible interpretation for these results is that these rhetorical strategies fit the context of use more than others. In other words, the subjects use the argumentative strategies which help them express better the idea or the argument in mind. If otherwise, subjects were given different topics being asked to use the same language devices, they would probably use the less frequently used in the present research more frequently. Another possible explanation for these results is concerned with the style of writing. What is meant by style here is the writer's voice, apart from the context of writing, purpose or audience. It refers to the way the writer prefers to express his/her thought: like the choice of words, sentence or paragraph structure. It is in short, the writer's fingerprint. In this context, the subjects would conceptualize the preference to use one rhetorical device over another because it is part of his/her own style.

The next result to be discussed is why the subjects in the control group also used all the language devices selected for the present study and with high frequency even though they did not receive instructions on them. A possible explanation is that the use of argumentative strategies is the result of transfer. English is a third language in Morocco and students are already familiar with writing in Arabic and French. Due scholarly experience in writing in both languages, which might include language argumentation, using language devices has become an automatic process ; bearing in mind that the selected language devices are used in Arabic. As a consequence, the use of language devices by the control group can be a result of transfer from Arabic or French.

### **Conclusion**

The present research has investigated the impact of language argumentation structure on the students writing for the first year university level. It involved specifically students who are majoring in Economy and Business; who are also required to pass a English course involving writing skill. The results indicated a pretty significant effect of this instruction. The students in the experimental group used more strategies than the students in the control group. This may lead to conclude that involving argumentative strategy instruction in writing course can be beneficial for the students in producing better arguments and more cohesive essays.

### **Appendix**

Topics:

1. Parents should become their kids' best friends.
2. Homework does more harm than good
3. Students should have the right to choose their teachers
4. Private schooling is more effective than public schooling
5. Grades do not indicate either intelligence or students' efforts
6. A gap year between high school and college provides more prospect future

## REFERENCES

- Abbadi, R. (2002), "The Construction of Arguments in English and Arabic: A Comparison of the Linguistic Strategies Employed in Editorials"  
[www.ling.mq.edu.au/.../..englishandarabic...pdf](http://www.ling.mq.edu.au/.../..englishandarabic...pdf)
- Azzaoui, A. (2010), "الحجاج في اللغة" in H, I, Alaoui, (ed.), *الحجاج حدود و تعريفات* Book 1 *الحجاج مفهومه ومجالاته*, Modern Books' World: Jordan
- Bouquera, N. (2005), "مجلة، الموقف الأدبي" "نظرية، الحجاج" No 407, <http://www.awu-dam.org/mokifadaby/407/mokf407-007.htm>
- Elyazale, N. (2012), "Argumentative Strategies in Moroccan Newspaper Editorials", PhD Dissertation.
- Hassana, O, A. (2008), *وزارة، الأوقاف والشؤون الإسلامية: قطر*, (Introduction) *من أساليب الإقناع في القرآن الكريم*, [www.ikhwanonline.com/article.asp?artID=4474&secID=390](http://www.ikhwanonline.com/article.asp?artID=4474&secID=390)
- Idema, R., Feez, S., and White, P. (1994), "Appraisal and Journalistic Discourse", Media Literacy, Sydney, [www.grammatics.com/appraisal/medialitAppraise.pdf](http://www.grammatics.com/appraisal/medialitAppraise.pdf).
- Morley, J. (2004), "The Sting in the Tail: Persuasion in English Editorial Discourse" in A, Partington, B, Morley, and L, Haarmen (eds.), *Corpora and Discourse*, New York: Peter Lang, PP. 239-255.
- Shahri, A, A. (2010), "اليات الحجاج و أدواته", in H, I, Alaoui (ed.), *الحجاج حدود و تعريفات* Book 1 *الحجاج مفهومه ومجالاته*, Modern Books' World: Jordan.
- Toulba, M, S, M, A. (2010), "الحجاج عند بيرلمان و تطوره في البلاغة المعاصرة", in H, I, Alaoui (ed.), *الحجاج مدارس و أعلام* Book 2 *الحجاج مفهومه ومجالاته*, Modern Books' World: Jordan.
- Toulmin, S. (1958), *The Use of Arguments*, Cambridge: Cambridge University Press.
- Westin, I., and Geisler, Ch. (2002), "A Multi-Dimensional Study of Diachronic Variation in British Newspaper Editorials", *ICAME Journal*, No 26, PP. 133-152.
- Wikipedia, (2009), [www.wikipedia.org](http://www.wikipedia.org)
- Wimmer, R, D., and Dominick, J, R. (1997), *Mass Media Research: An Introduction*, California: Wadsworth Publishing Company.

# VEBH: Virtual Education for Basic Health Model in High School Level

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## Abstract

There are many health issues like communicable diseases i.e. diarrhea, cholera, typhoid fever, acute respiratory infection, hepatitis, skin diseases etc. exist in our society. Basic health education is very important to reduce diseases' alerts and outbreaks in a society and increase healthy life expectation for its users. Using of Information Communication Technology (ICT) trend in every field has been increased and ICT is also improving the education. Virtual education is low cost source and available in anytime, anywhere and any place. Therefore, we proposed a virtual education for basic health model in school level of country Pakistan. In this research paper, the proposed research model will educate the school students about disease information, causes, precaution and prevention. This model would be very much effective because, when students, teachers and parents (due to replication of students in their homes) aware from basic health education then healthy society may develop. The society would become more aware of information related to the diseases and progressively this model and software could become an independent source of information to schools. The students may become volunteer in a society to help and contribute in prevention of diseases' outbreaks as and occurred.

**Keywords-** ICT, virtual education, health education, health issues

## 1. INTRODUCTION

The usage of Information Communication Technology (ICT) is rapidly growing in every field. Subsequently, use of ICT, in remote /far away areas is also growing. Specially, ICT infrastructure and teaching in schools, colleges is now common. Moreover, communities and people are now accessing information on many topics of their interest using online mobile network facilities. Widespread and cheap packages of Internet have enabled the society to access information on many topics according to their need and requirements. Therefore, systems could be developed which enable children to get online education and people in the society in future to get more organized information on business, opportunities, health, transportation, weather and other areas of their interest. Such systems could also help society to improve its social, health and economic conditions by deploying and using ICT based systems. Such systems could be highly accessible to rural and remote area students and teachers. There are many resources which help the virtual learning for example web-based education, electronics based (computer, laptop, tablet) education, cloud based education and virtual laboratories (Lawhead P. & Jean D, 1997) and (Kotzinos D., Pediaditaki S. & Attanasis N., 2005). Use of ICT in education, would increase motivation toward learning or education. ICT plays a major role in increasing interest in education (V.P. Ramos, 2015).

### 1.1. VIRTUAL EDUCATION

Virtual education is a learning platform for students where they learn through multimedia resources, Internet and software applications, teachers or administrators can also involve for the learning (Ciaramitaro, 2011).

Virtualization is a computing procedure to show illustrations of rather than actual things including or using software and hardware resources (Wikipedia, update in 2017). Virtual education is also called digital education or online education or web based education. Without information communication technologies virtual is not possible, therefore ICT plays important role in virtual utilization and implementation. In our proposed model virtual education will be offered without physical availability teachers in classrooms.

### 1.2. HEALTH EDUCATION

Education aids and participation in basic health knowledge and information of the individuals or society or community for their healthy life is called health education (WHO, 2017). Health education can improve health skills, arrogances and conducts of the individuals, communities, institutions and organizations.

The famous Desiderius Erasmus quoted that "prevention is better than cure" (Brain Quote, 2017). We can also determine our health importance from Holy Quran and Hadith verses for example at Holy Quran says that *"All worthy that occurs to you is from Allah (SWT), all evils that take place to you is from your personal activities [O Man]"* (Quran 04:79). Similarly, at Holy Quran Allah says "Eat those which are legitimate and good on earth" (Quran 02:168). In Hadith Tirmidhi, Hazrat Muhammad (Peace Be Upon Him) said that *"Ask Allah (SWT) for forgiveness and health"* (Tarmidhi, Vol. 4, Book 2, Hadith 2083). Similarly, in Imam Nawawi's Hadith, Hazrat Muhammad (Peace Be Upon Him) said that *"Cleanliness is half Iman (Faith)"* (Imam Nawawi Chapter 01, and Hadith 22). There are many Quranic versus and Hadiths which tell to human about health knowledge and information. Allah likes hygienic and purity because He is Pure and Clean. From the Holy Quran and Hadith, we can find health education importance and its learning as a duty as specified in Islam.

There has been effort made about health education in many countries, especially in developing countries by WHO. However, use of health education using of ICT is rare.

### 1.3. REGIONAL OR COMMUNITY IMPACT

Society or community is same geographical area which comprises group of people for social activities and cultural interaction (Oxford Dictionary, 2017). According to (Muhammad, Mumtaz and Malik, 2013) the country Pakistan has estimated 190m population, rural population ratio is 64%, urban population ratio is 36%, population growth rate is 1.55%, birth rate is 24.3 births per 1000 populations and deaths rate is 6.8 deaths per 1000 population (2011 est.). The issues in our society or communities are lack of public health education awareness, which is either not available, and if available it not uniformly disseminated to rural and remote communities. Cost of that awareness through T.V. and news media is prohibitive as well.

A lot of problems related with health exist within Pakistani societies or communities. Main reason is lack of awareness on identification, reporting, prevention and curing of these issues. Some common communicable diseases' alerts and outbreaks occur to society or community because of no basic health knowledge about its causes, precaution and preventions. Here is, a great gap of basic health education in our schools, colleges and societies.

Using of ICT can a major role to combat health issues by providing basic health education to students and teachers. Information Communication Technology (ICT) can help to exchange information and knowledge on basic health issues. The social media groups have displayed the effectiveness of ICT community to push information and can be utilized for propagation Basic Health education.

## 2. LITERATURE REVIEW

Here, we discuss about earlier work on virtual education, health education & ICT and society & ICT.

### 2.1. VIRTUAL EDUCATION

Web based environment can be accessed from anywhere, anytime and on any device i.e. easily accessible from remote areas (Moodle, 2016). The virtual education practices will increase quality and productivity of education in all sectors (Soltani and Aliyev, 2011). The use of information communication technology, a virtual classroom is very effective method for the education quality improvement (Shengqing, Zhiyong and Shan, 2011). According to National Kaohsiung Normal University in Taiwan research report describes that families and colleges showing high interest in virtual or online learning for education (Chang, KAO and Chen, 2013).

The Allama Iqbal Open University initiated OLIVE (Open Learning Institute of Virtual Education) at Computer Science Department which were stimulated by faraway students i.e. rural and urban areas especially by female students (Sangi and Moiz, 2015).

The first Virtual University of Pakistan has started in 2002 and now working in more than one million cities in different programs (VU, 2015). Similarly, the CIIT (COMSAT Institute for Information Technology) started virtual campus throughout Pakistan which teach different programs in undergraduate and graduate levels (CIIT, 2016). The AIOU researchers found high interest of the students to use ICT i.e. mobile phones for their education and learning activities (Bakhsh, Mehmood and Sangi, 2015). Virtual education is implemented in many universities of Pakistan but schools and colleges are still in traditional level learning. The use of mode in Basic Health education

can have two benefits at least, firstly virtual education in high schools and secondly health awareness in young children to prepare them and their families for healthy society.

## 2.2. HEALTH EDUCATION AND ICT

The two Chinese researchers Chen and Lai stated in their research that lifestyle can be healthy and encouraging by self-accountability, strain maintaining, physical capability and nutrition knowledge awareness (Chen and Lai, 1999). Similarly, according to other three Chinese research in rural Chinese villages proved that the health education reduced death risk and improved the hypertension patients by educating them from hypertension knowledges (Yang, Sun, Yao, 2011).

H-EtICT-8 (Health Education Through ICT for K-8) is a tutorial software for health education through ICT for K-8 in Turkey, this tool informs the 8<sup>th</sup> grade students that is how to prevent themselves from AIDS/HIV (Dursun, Sahin, Kavak and Turuskan, 2006). This software does not provide education on other basic health diseases. It does not provide preventive or monitoring education and is limit to 8<sup>th</sup> grade students only. However, this software is old and lacks of many new technological advances and communication possibilities.

e-health (electronic health) education was considered useful or enhance knowledge and information for learning in UK (Harland and Bath, 2008). World Health Organization-Emergency Humanitarian Action & Response initiated eDEWS (Electronic Disease Early Warning System) project in Pakistan for weekly diseases alerts and analysis reports (WHO-EHA, 2012). In Yemen, eDEWS project was launched for outbreak detection including immediate alert reporting and weekly data collection using mobile SMS alert and web based interface (WHO, 2013). Similarly, eDEWS in Somalia (WHO, 2013), Iraq (WHO, 2015) and Turkia initiated disease alert system (WHO, 2016). These were however projects which did not continue affectively after project period. It is envisaged that if school students are trained, they can firstly retain it for a longer period and secondly can contribute to the continuity of the data in the software and systems.

Due to virtual reality technology, students of schools can get help and health education of all phases from their homes that's why the students will reduce cost of study and increase finding skilled training (Galvao and Zorzal, 2013). European started eHealth for chronic diseases treatment with the help involvement of patients and doctors. (ICT for Health, 2017).

The four Pakistani researchers developed a Community Health Information System (CHIP) which is web based software and working for data and information gathering of major diseases from health care providers (Siddiqui, Raza-us-Samad, Shaikh, 2013). This application is only for data and information of diseases statistics on real time and there is no involvement of students and community for health education and awareness.

We reviewed and compared all researchers' literatures of different countries about health related projects or works according to education and found that there is no basic health education work exist in high schools for communicable diseases only virtual education for basic health model will work for basic health i.e. communicable diseases knowledge and information as shown in table 1.

Research work location/detail	Project/research work	Focus	Community health education
<b>UK</b>	H-EtICT-8	For AIDS/HIV education (Dursun, Sahin, Kavak and Turuskan, 2006). It does not provide preventive or monitoring education and is limit to 8 <sup>th</sup> grade students only.	<b>Yes</b>
<b>Europe</b>	eHealth	For patients and doctor interlink (chronic diseases) software (ICT for Health, 2017).	<b>No</b>
<b>China</b>	Information Education Communication materials	For hypertension patient's education using IEC material without ICT use (Yang, Y. Sun, Y. Lin and W. Yao, 2011).	<b>No</b>

Yemen	eDEWS (Electronic Disease Early Warning System)	For patients' data collection from health centers & alerts generations (WHO-EHA, 2013).	No
Iraq	eDEWS	For patients' data collection from health centers & alerts generations (WHO-EHA, 2015).	No
Somalia	eDEWS	For patients' data collection from health centers & alerts generations (WHO-EHA, 2013).	No
Pakistan	CHIP (Community Health Information System for Pakistan)	For patients' data collection from health centers and doctor consultation (Siddiqui, Raza-us-Samad, Shaikh, 2013).	No
Pakistan	eDEWS	For patients' data collection from health centers & alerts generations (WHO-EHA, 2012).	No

Table 1. Comparative study of different researchers' work

### 2.3. BASIC HEALTH ISSUES IN DEVELOPED COUNTRIES AND PAKISTAN

In United States, most common diseases which have higher ratio are; Hypertension, Mental Health, Cancer, Diabetes, HIV/AIDS, Respiratory Infection, Tuberculosis, Overweight and Obesity (URMC, 2017). Similarly, these diseases are also occurring commonly in European countries (European Commission, 2017). In Pakistan, most commonly occurrence diseases are; Cholera, Typhoid, Diarrhea, Diabetes, Skin diseases, Respiratory Infection, Nutrition problem and Hepatitis diseases (Wikipedia, 2016). But Diabetes and Respiratory Infection diseases incidence averagely are same in all countries.

Therefore, researchers would say that the most common diseases are communicable diseases which faces by society of Pakistan. These health issues are occurring due to low knowledge about health and its prevention. Our concern to categorize the society common diseases and educate the society for their healthy life. In Pakistan (Iqbal and Waqar, 2015) the most common health problems are categorized as; diarrhea, acute respiratory infections (ARI), hepatitis, tuberculosis, etc. are called communicable diseases and diabetes, hypertension, cardiovascular diseases, malignancies, etc. are called non-communicable diseases but they are also most common and can be termed as basic health diseases in Pakistan.

### 3. PROBLEM STATEMENT

Firstly, it is therefore realized that, there are basic health issues, these have some pattern with season, community and region and there are specific issues which have preventive measures as well as awareness need to; present those, identify when these occur and know what steps may be taken to get medical assistance or meet any emergency within each basic disease.

Secondly, there exists virtual education and e-health models around world but those were developed years back and did not integrate information, preventive measures, symptoms in the regions and times when those are at peak in any part of the world.

Thirdly, there does not exist a basic health model which is integrated into community norms, their food consuming and health care habits. Neither is public nor young people aware of simple preventive, curative and emergency help related matters. Therefore, there is a need to work into this problem in depth, model the common diseases which are basic health hazard to society we live in and then develop a system for education and awareness of high schools.

My proposed research problem statement is therefore summarized below:

***"Investigate and identify basic health issues and design a model for basic health issues, preventive measures and information on handling such issues by development (and testing of prototype) software for dissemination of health information and education through virtual or online technologies."***

### 4. OBJECTIVES OF THE PROPOSED RESEARCH

Objectives of the proposed research are as follows:

1. Investigate and identify basic health issues in society or communities.
2. Explore existing basic health education systems (if any).
3. Develop a feasibility and appropriate model for education and information access in online and virtual education mode.

4. Propose the basic health education concept and develop an education and information dissemination model for students of schools.
5. Develop a technology based prototype software system for easy access to users of schools from anywhere and anytime.
6. Develop a method and test this software model for acceptance and effectiveness in basic health education in selected regions.
7. Measure the overall effectiveness of the basic health model and virtual education for basic health software.

## 5. RESEARCH QUESTIONS AND RESEARCH METHODOLOGY

Following research questions will be examined during research process:

- a. **What basic health diseases and information should be focused for involvement of the communities and groups of people?**
- b. **How these diseases behave w.r.t. time, place and region or community?**
- c. **Which precautions/interventions may be required for a particular Basic Health threat?**
- d. **What should be a model for basic health education specially focusing on the region or communities?**

Initially investigations will be conducted into the basic health diseases and their characteristics. The WHO health definitions and the characteristics of various diseases such as seasonal period, extent, society and/or regional locations etc. (if any) will be identified. The influences which propagate such diseases or interventions which help prevent or cure will also be collected along with the standard content available in the world.

- e. **Are the selected sample communities ready for virtual education for basic health?**
- f. **What interventions may be required for schools to impart basic health education?**
- g. **How selected model could be used for effective and efficient basic health education of children in high schools?**

In a parallel activity, the e-learning readiness of the sampled population/region will be carried out through an ICT survey of the sample population/region. The interaction with doctor/health professionals will be made to identify preventive and curing methods suitable in Pakistan and especially in sampled population in order to develop a localized VEBH model for our use.

The model will be verified (e.g. using Delphi technique) from health experts, education experts or sharing information in an appropriate conference or forum with special emphasis on education and information dissimulation of the model.

In a parallel activity, the e-learning readiness of the sampled population/region will be carried out through an ICT survey of the sample population/region. The interaction with doctor/health professionals will be made to identify preventive and curing methods suitable in Pakistan and especially in sampled population in order to develop a localized VEBH model for our use.

Baseline survey will also be conducted followed by interviews with community medicine health professionals and school heads/management. This hopefully will provide authentic input and requirements for the education delivery process and content model (i.e. a model of VEBH). A prototype will be developed using this information. Finally, the model will be applied to sample schools and data will be collected and analyzed with following research questions:

- h. **Is VEBH model effective in organizing and dissemination of basic health education?**
- i. **Is VEBH model acceptable to the high schools students and teachers?**

There will be a survey and interviews after use of each virtual education session in different schools comprising of fair representation of both male and female schools in urban, semi urban and rural/remote communities as per convenience and availability of ICT resources. The effectiveness and acceptance of model will be verified from data collected on use of the model and/or survey responses from users of the website. The adapted Technology Acceptance Model (F.D. Davis, 1989) will be used for comparison purpose and ascertaining the valid results. The software prototype for VEBH model will be developed to represent the model and tested initially with sample population for conceptual and functional validation. This software will be opened for field use in schools. The results as and when available in each process stage will be shared in conference/journals for comments or criticism and in the light of such input VEBH model will be adjusted.

The proposed research methodology also shows in figure 2. During the specific requirements, it may be adjusted



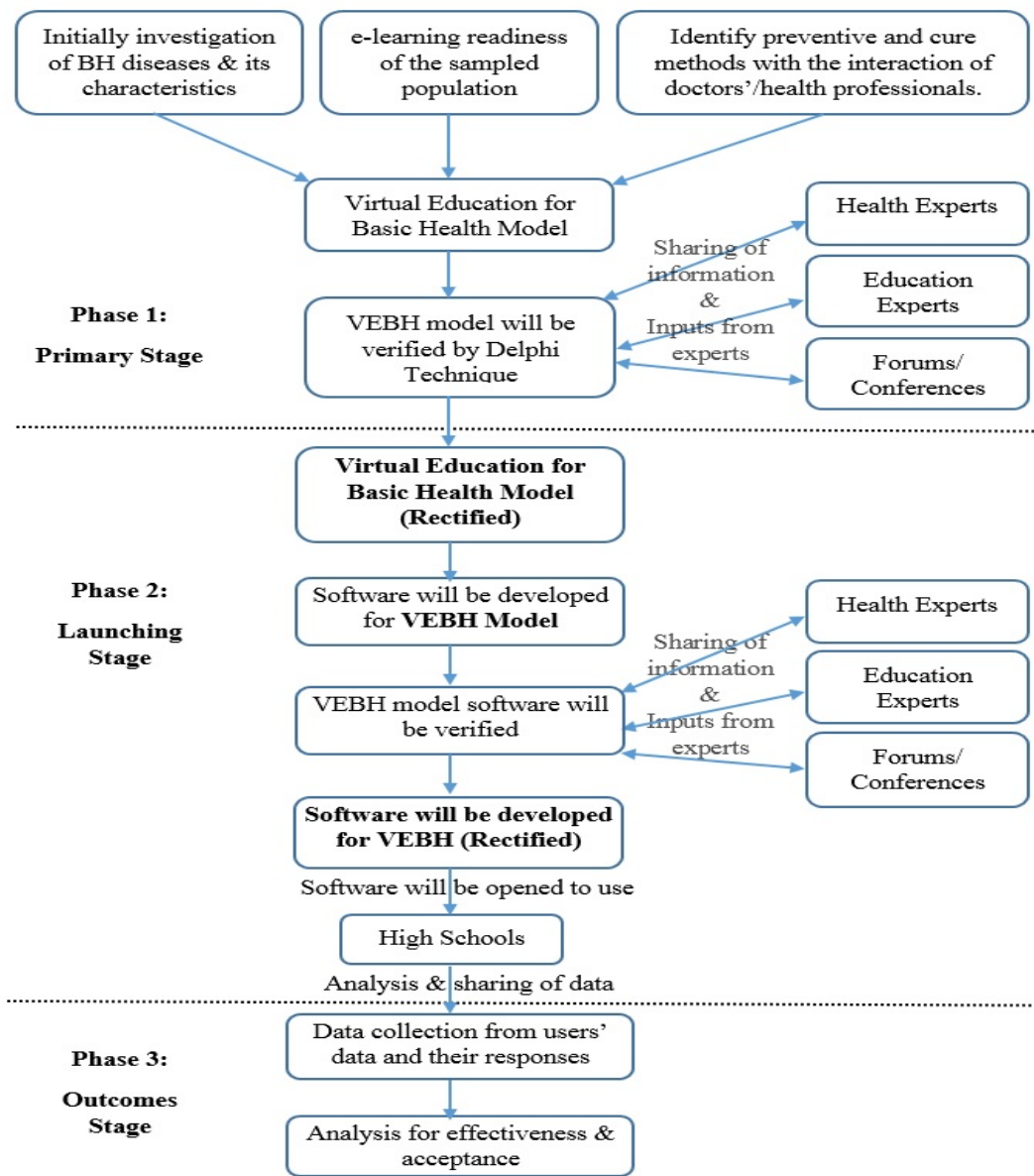


Figure 1. Research methodology flow chart

## 6. EXPECTED RESEARCH MODEL

Even though the actual research model will evolve from the research methodology as explained. However, it is envisaged that the expected VEBH model may cover the following major contents as shows in figure 3 and as detailed in proceeding paragraphs components.

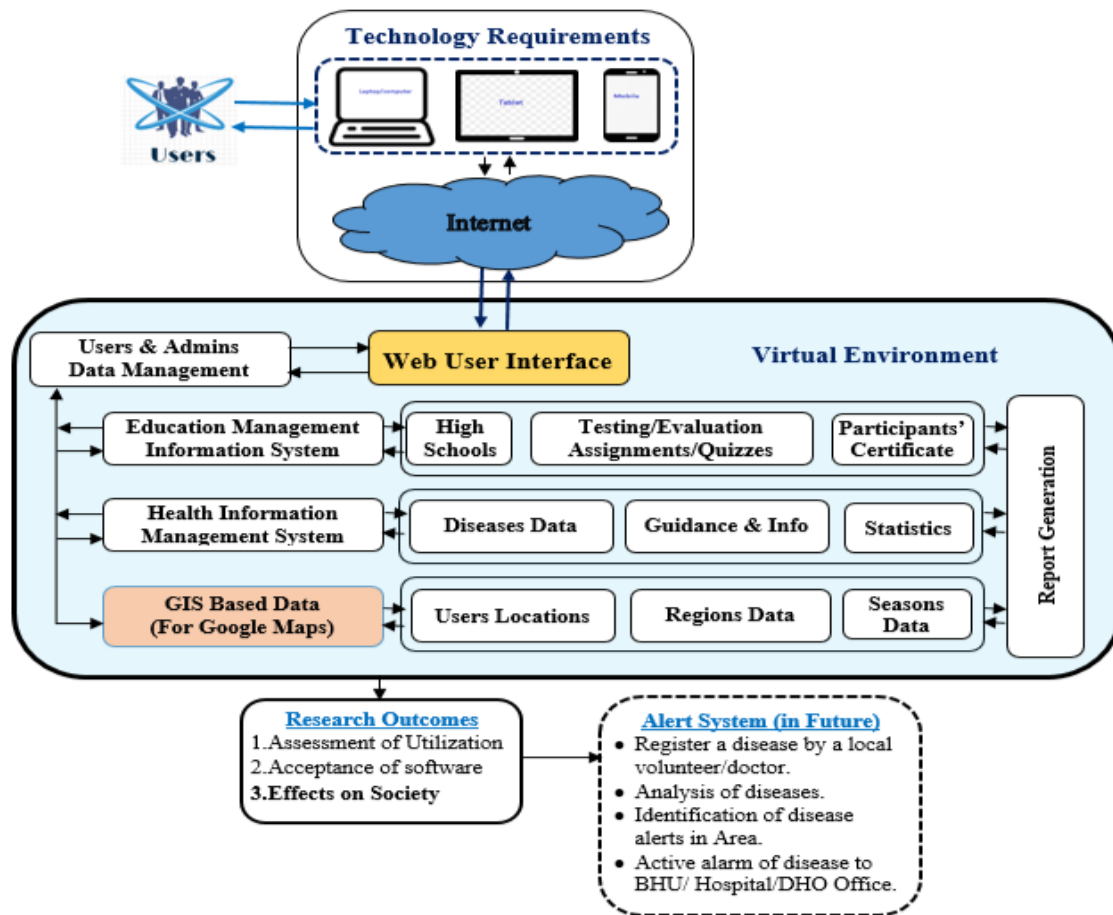


Figure 2. Virtual Education for Basic Health Model

### 6.1. USERS

Students and teachers of high schools (i.e. 6<sup>th</sup>, 7<sup>th</sup>, 8<sup>th</sup>, 9<sup>th</sup> and 10<sup>th</sup> classes) are main users of the virtual education model for basic health. The other users may view the data may be parents/public, health professionals and researchers. There will be system administrator for managing all; education, health and GIS related data and information. The users may view or use VEBH software after due registration process. The Internet connection requirement is also important part for the research model.

### 6.2. TECHNOLOGY REQUIREMENTS

The proposed model will work on different devices like personal computers, laptops, tablets, notebook and smart phones. It would be capable to responsive mode i.e. depend on users' choices which type of devices they are using. The teachers, students and administrators can access anytime and from anywhere. As nowadays, diversity of devices is common, therefore we would use a such technology which would be adoptable for device the users will used and identified in first stage of research. The Internet connection requirement is also important part for the research model.

### 7.3. VIRTUAL ENVIRONMENT

The virtual environment is basically knowledge based system in which included the all data and information which needs to be processed for the knowledge extraction and sharing of information. Information communication technology i.e. different technologies will be used for this environment for example GIS based data (for google maps), health information management system (for health related data) and education management information system (for education related data). Virtual environment is the main portion of the proposed research work. This portion contains following modules:

#### 7.3.1. WEB USER INTERFACE

Web based technology will be used for the communication between users and all management process data.

will be used. The users friendly web user interface will be used. The user interface will connect different tools i.e. database tools, user views and GIS tools to the devices and applications.

#### **7.3.2. USERS & ADMINS DATA MANAGEMENT**

In this module, users (students and teachers of high schools) and administrators (staff for health information management and education information management) data and information will be managed from different modules and sub modules. For the users' authentication, it is need to find out the users' interest and their uses of the proposed research software.

#### **7.3.3. EDUCATION MANAGEMENT INFORMATION SYSTEM**

EMIS (Education Management Information System) contains all related to education information storing, maintaining, controlling and transactions. It will comprise of sub-modules which will manage all data and information about education level.

##### **A. HIGH SCHOOLS**

In this sub module high school level learning contents will be included in the form of text, image, audio and video. The students and teachers of high school classes will involve in proposed model. We select high school users for our research work as they are near to union council or village council society and would be replicate basic health related knowledge in their homes for healthy society evolution. In future virtual education for basic health will be in college and community at large.

##### **B. EVALUATION SECTION**

In this sub module, the users will be evaluated by assignments, quizzes, examination, viva voce and discussion. These evaluations will be included different time intervals and activities for the user judgement and assessment. All assessments' methods will contain different style and type according to the user mind understanding i.e. to find out how much the users learn existing?

##### **C. PARTICIPANTS' CERTIFICATION**

In this sub module, the users will be awarded certificates according to their participant. The participant's certification is need for the motivation of the users to learn the basic health and will consider volunteers for the future healthy society.

#### **7.3.4. HEALTH INFORMATION MANAGEMENT SYSTEM**

HIMS (Health Information Management System) will manage and process all basic health related data and information. HIMS will display the disease related guidance and information (i.e. information about disease symptoms, precaution, causes and prevention). HIMS will store, manage and analyze diseases data and information. This portion will store, extract and deliver information about health from the following sub modules.

##### **A. DISEASES DATA**

It will contain multiple documents i.e. multimedia like audio, video, image and text forms of WHO standard information. In our proposed research model communicable diseases related data would be included and their related data would be used for the sharing of information and education. The communicable diseases are those which are spreading from one person or place to another person or place. Mostly, this incidence occurs due to our lack of basic health education.

##### **B. GUIDANCE AND INFO**

It will help for the users' guidance and information about basic health education. In this portion, the users will learn about communicable diseases information. It will guide the users about diseases' symptoms, causes, precaution and preventions. For standard the WHO standard information will follow.

##### **C. STATISTICS**

HIMS also will cover statistics portion, in which alerts, outbreaks and all analysis data and information will be visible. For better and effective result, the WHO standard follow up is selected as criteria base for alerts formulation, outbreaks formulation, how to keep the diseases data, how to analyze the diseases data and so on. This will help to integrated further with world and us.

#### **7.3.5. GIS BASED DATA (FOR GOOGLE MAPS)**

It will include pre-stored location wise and season wise data according to health related issues i.e. region wise common diseases, season wise common diseases and education related data and information. Nowadays, GIS (Geographical Information System) is very important to point out region wise location i.e. easily find out the exact locations and problems. This data will be acquired from WHO data set.

**A. USER LOCATIONS**

In this GIS sub module, the schools' locations will be stored, the students' location will be stored and the teachers' locations will be stored. The user locations are need to find out the users' society and their effects on society.

**B. REGION DATA**

In this GIS sub module, the area or region locations will be stored. It is need to find out geographical area of the users. It also stored regions related diseases data and information because different geographical area has different diseases which need to be addressed.

**C. SEASONS DATA**

In this GIS sub module, different seasons data and information about diseases will be stored. Mostly, different seasons have different diseases prevalence, therefore, it is also need to educate the users according to seasonal diseases information.

**7.3.6. REPORT GENERATION**

In this sub module, the system will generate an analysis report of users' health knowledge according to schools and location wise data, which will work for future policy making and analysis. The report will contain the users' wise, location wise, region wise, schools wise. The report will be final analysis report of the users' knowledge about basic health education.

**7.4. RESEARCH OUTCOMES**

This section will also collect background user login and access information for use in the thesis and analysis of system acceptance and effectiveness. The feedback collected will be analyzed for rectification of issues and problems or identifying additional future needs of the system.

**7.5. ALERT SYSTEM (IN FUTURE)**

This module kept for future use. This will be working on dynamic mode i.e. it will take inputs from volunteers' /health workers (users learned from basic health education) and doctors. After inputs the system will generate alerts or outbreaks, identify an area of affected then send to concerned and nearest health center and District Health Office for necessary action and information.

**8. DELIMITATION OF PROPOSED RESEARCH**

1. The Basic health comprises of many activities and diseases which start from personal health and hygienic to a community health and hygiene.
2. It has a number of diseases and various seasons or events for their outbreaks. They also range from minor to major effects on population. These also have often regional impact on the people living in a community or doing specific activity.
3. In this research, the focus on the development of a Basic Health Education Model and building the local, seasonal, preventive and cure intelligence in the system. Therefore, initially prototype will be tested on major hygienic, basic health and outbreak type of diseases as defined by Ministry of Health, Provincial of Directorate of Health and Federal Directorate of Health. Three examples of each will be focused in model building, testing and analysis stages.
4. Additional even though virtual education for basic health could be accessible from anywhere, data will be sampled for Swat District which has 2.2 million population, 04 government hospitals, 65 Basic Health Units

government female colleges. There are a large number of private institution as well. It has a rich variety of basic health issues and problems in difficult regions with accessibility problems etc. A reasonable representative sample of institutions, students will be selected in consultations.

5. The selection of Swat is also made on convince basis as we have access to schools, hospitals and peripherals and can get data easily. However, the system once developed and tested can be enhanced to new regions, new problems and new diseases etc.
6. The system will be developed with content in English language for testing purpose (and perhaps with translation family as per google where applicable). Mobile accessibility may/may not be included depending on technologies available to schools and colleges students.

## 9. SIGNIFICANCE OF THE PROPOSED RESEARCH

Due to usage of ICT the traditional education is transforming into virtual education. Therefore, in future, virtual education for basic health will be very useful. This research model may be used in any schools, colleges and society which will teach basic health education.

## 10. EXPECTED OUTCOMES AND BENEFITS

Following, there are main expected outcomes of this research. Additional benefits are also given.

1. Virtual Education Model for Basic Health will be developed based upon input from research.
2. A Virtual Education for Basic Health (VEBH) software prototype will be developed.
3. The software can be used every year to get more health statistics in future and extend it for other areas.

### BENEFITS

4. This model would be very much effective because, when students, teachers and parents (due to replication of students in their homes) are educated about basic health education, then progressively a healthy society may develop.
5. The society would become more aware of information related to the diseases and progressively this model and software could become an independent source of information to schools, colleges, WHO, hospitals and public at large.
6. The students'/health workers may become volunteer in a society to help and contribute in prevention of diseases' outbreaks as and occurred.
7. The students would learn, how to prevent outbreak of communicable diseases through basic health education.
8. The proposed model would increase healthy life expectation for its users.

## REFERENCES

- A. A. Siddiqui, M. Raza-us-Samad, F. A. Siddiqui and Z. A. Shaikh, "Community health information system focusing Pakistan," *2013 5th International Conference on Information and Communication Technologies*, Karachi, 2013, pp. 1-9.  
doi: 10.1109/ICICT.2013.6732779  
URL: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6732779&isnumber=6732770>.
- B. Yang, Y. Sun, Y. Lin and W. Yao, "Health education about hypertension in the elderly in rural Chinese villages," *Proceedings 2011 International Conference on Human Health and Biomedical Engineering*, Jilin, 2011, pp. 852-855.  
doi: 10.1109/HHBE.2011.6028956  
URL: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6028956&isnumber=6028956>.
- Chang, C.-C., KAO, P.-L., & Chen, S.-H. (2013). Enhance Learning Satisfaction by Applying Moodle E-Learning Platform-An Example of a Regional Teaching Hospital. *Management information computing*, 2(1), 11. doi:10.6285/MIC.2(1).17.
- Ciaramitaro, B. L. (2011). Virtual Education. In B. Ciaramitaro (Ed.), *Virtual Worlds and E-Commerce: Technologies and Applications for Building Customer Relationships* (pp. 144-159). Hershey, PA: IGI Global. doi:10.4018/978-

- CIIT, "About CIIT Virtual Campus", available online: <http://www.vcomsats.edu.pk/aboutus>, 2016 [last accessed on 03.2.2017].
- Desiderius Erasmus. BrainyQuote.com, Xplore Inc, 2017. <https://www.brainyquote.com/quotes/quotes/d/desiderius148997.html>, [Last accessed on 17.01.2017].
- Europe Commission (2017) "Public Health". Major diseases topic on [https://ec.europa.eu/health/major\\_chronic\\_diseases/diseases\\_en](https://ec.europa.eu/health/major_chronic_diseases/diseases_en) [last accessed on 18.01.2017].
- F.D. Davis, 1989, Perceived usefulness, perceived ease of use, and user acceptance of information technology, MIS Q, 13 (1989), pp. 319–339.
- Harland, J.A. and P.A. Bath, Understanding the information behaviours of carers of people with dementia: a critical review of models from information science. *Aging & mental health*, 2008. 12(4): p. 467-77.
- ICT for Health (2017) "ICT for Health". eHealth topic on <http://www.ictforhealth.net/> [last accessed on 21.01.2017].
- IGI Global (2017) "What is Virtual Education". Virtual Education topics on <http://www.igi-global.com/dictionary/virtual-education/31665> [last accessed on 16.01.2017].
- Imam Nawawi's 40 Hadith "About purity", available online: <http://ahadith.co.uk/permalink-hadith-462>.
- IndexMundi (2016) "Pakistan Major Infection Diseases". Common diseases topic on [http://www.indexmundi.com/pakistan/major\\_infectious\\_diseases.html](http://www.indexmundi.com/pakistan/major_infectious_diseases.html) [last accessed on 18.01.2017].
- Kotzinos D., Pediaditaki S., and Athanasis N., "Online curriculum on the semantic Web: the CSD-UoC portal for peer-to-peer e-learning," in *Proceedings of 14th international conference on World Wide Web*, 2005.
- Lawhead P., and Jean D., "The Web and distance learning: what is appropriate and what is not", *ITiCSE working group on the web and distance learning*, Tech.Rep.27-30, 1997.
- M. A. Galvao and E. R. Zorzal, "Augmented Reality Applied to Health Education," *2013 XV Symposium on Virtual and Augmented Reality*, Cuiaba, 2013, pp. 268-271. doi: 10.1109/SVR.2013.54. URL: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6655796&isnumber=6655742>.
- Moodle (2016). "Web based Education" Virtual Education topic on [https://docs.moodle.org/32/en/About\\_Moodle#Proven\\_and\\_trusted\\_worldwide](https://docs.moodle.org/32/en/About_Moodle#Proven_and_trusted_worldwide) [Accessed 29 January, 2017].
- M. Soltani and A. Aliyev, "Virtual teaching at the education centers," *2011 5th International Conference on Application of Information and Communication Technologies (AICT)*, Baku, 2011, pp. 1-3. doi: 10.1109/ICAICT.2011.6110948 URL: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=6110948&isnumber=6110878>.
- M. Perwaiz Iqbal and M. Anwar Waqar, "Basic Medical Research as a Means of Solving National Health Problems", URL: [http://jpma.org.pk/full\\_article\\_text.php?article\\_id=4612](http://jpma.org.pk/full_article_text.php?article_id=4612), 2015.
- Muhammad N, Mumtaz A, Malik S. S., "Public Health Issues in Pakistan" available online: [http://www.pjmhsonline.com/2013/july\\_sep/pdf/855Public%20Health%20Issues%20in%20Pakistan.pdf](http://www.pjmhsonline.com/2013/july_sep/pdf/855Public%20Health%20Issues%20in%20Pakistan.pdf), 2013.
- M. Bakhsh, A. Mahmood and N. A. Sangi, "An assessment of students' readiness towards mobile learning at AIOU, Pakistan," *2015 International Conference on Information and Communication Technologies (ICICT)*, Karachi, 2015, pp. 1-6. doi: 10.1109/ICICT.2015.7469579 URL: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7469579&isnumber=7469477>.
- Nazir Ahmed Sangi and Moiz Uddin Ahmed, "E-Learning Initiatives at AIOU – A Case Study of Using ICT in Education", *Conference paper* (2015).
- O. O. Dursun, M. C. Sahin, E. Kavak and A. Turuskan, "H-EtICT-8 (Health Education Through ICT for K-8): Stop Aids Now!", *2006 ITI 4th International Conference on Information & Communications Technology*, Cairo, 2006, pp. 1-1. doi:10.1109/ITICT.2006.358264 URL: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=4196488&isnumber=4196464>.
- Oxford English Dictionary, "Society", Society topic on <https://en.oxforddictionaries.com/definition/society> [last accessed on 20.01.2017].
- Quan, "Quan verse 04 & ayat no. 79", available online at <https://quran.com/>.
- Quan, "Quan verse 02 & ayat no. 168", available online at <https://quran.com/>.
- S. C. Chen and Y. H. Lai, "Pender Theories of Health Promotion," *Chang Gung Nursing*, Vol. 10, No. 4, 1999, pp. 55-61.

- URMC (2017) "University of Rochester Medical Center". Senior Health topic on <https://www.urmc.rochester.edu/senior-health/common-issues/top-ten.aspx> [last accessed on 18.01.2017].
- V. P. Ramos, "ICT in the curriculum using scratch with students of the alternative curriculum," *2015 International Symposium on Computers in Education (SIIE)*, Setubal, 2015, pp. 69-72. doi: 10.1109/SIIE.2015.7451650 URL: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7451650&isnumber=7451633>.
- Virtual University of Pakistan, "About Virtual University of pakistan", available online: <http://vu.edu.pk/AboutUs/AboutVU.aspx>, 2015 [last accessed on 03.2.2017].
- WHO (2012) "eDEWS in Pakistan". DEWS project topic on <http://www.who.int/countries/pak/en/> [last accessed on 20.01.2017].
- WHO (2013) "eDEWS in Yemen". DEWS project topic on <http://www.who.int/countries/yem/en/> [last accessed on 20.01.2017].
- WHO (2013) "eDEWS in Somalia". DEWS project topic on <http://www.who.int/countries/som/en/> [last accessed on 20.01.2017].
- WHO (2015) "eDEWS in Iraq". DEWS project topic on <http://www.who.int/countries/irq/en/> [last accessed on 20.01.2017].
- WHO (2016) "eDEWS in Turkia". DEWS project topic on <http://www.who.int/countries/tur/en/> [last accessed on 20.01.2017].
- World Health Organization (2017) "Health Education". Health topics on [http://www.who.int/topics/health\\_education/en/](http://www.who.int/topics/health_education/en/) [last accessed on 16.01.2017].
- WHO & KP Government, "Weekly Epidemiological Bulletin" eDEWS report URL: [http://complex.pakresponse.info/LinkClick.aspx?fileticket=gH\\_3oLjA6hM%3D&tabid=78&mid=505](http://complex.pakresponse.info/LinkClick.aspx?fileticket=gH_3oLjA6hM%3D&tabid=78&mid=505), 2013 [last accessed on 05.01.2017].
- W. Shengqing, L. Zhiyong and H. Shan, "Study and practice: How to construct open classroom in higher education via virtual classroom," *2011 International Conference on E-Business and E-Government (ICEE)*, Shanghai, China, 2011, pp. 1-4. doi:10.1109/ICEBEG.2011.5887171 URL: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=5887171&isnumber=5876649>.
- Wikipedia (2017) "Virtual". Virtual topic on <https://en.wikipedia.org/wiki/Virtual> [last accessed on 16.01.2017].

# VIDEOCONFERENCING AND FOREIGN LANGUAGE LEARNING: PEDAGOGICAL IMPLICATIONS

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## **Abstract**

Nowadays, a great deal of research has been produced on the effects of an on-line environment on the language teaching and language learning process, where Internet has been quickly and eagerly taken up by educators as both a tool and a medium for foreign language education. The type of teaching delivered in such classrooms is referred to as network-based language teaching (NBLT), and the technologies most commonly used as either non-synchronous communication tools (such as e-mail and online discussion boards), or synchronous tools (such as web-based videoconferencing, and chats). This article is, then, to discuss the pedagogical implications of video-based communication, such as videoconferencing which distinguishes itself greatly from the other technologies, on foreign language learning.

**Keywords:** Video-conference, Foreign Language Learning, Pedagogical implications, Culture, Communication.

## **Videoconference**

Videoconferencing technology is a set of interactive telecommunication technologies which allow two or more locations to see and hear each other at the same time via two-way video and audio transmissions simultaneously. This rich communications technology, called also visual collaboration, offers new possibilities for schools and colleges to connect with guest speakers and experts, multi-school project collaboration, professional activities such as meetings and interviews, and community events.

A video call is like a telephone call, except when you connect, you see the other person in color video and may be able to transfer files. The call can be between two people in private offices (point-to-point) or involve several sites (multi-point) with more than one person in large rooms at different sites.

A videoconference system must have audio-visual equipment. This includes: video input (video camera or webcam), video output (computer monitor, television or projector), audio input (microphones), and audio output (usually loudspeakers associated with the display device or telephone). It needs, also, a means of transmitting information between sites (analog or digital telephone network, LAN or Internet).

Among the benefits of a visual connection, is that it is an interactive communication medium. It is almost like being there. The visual connection and interaction among participants enhances understanding and helps participants feel connected to each other. It supports collaboration among traditionally isolated institutions and builds relationships in a way that e-mail, telephone, or online chat systems cannot. The excitement of using new technology and interacting with other students or adults increases motivation, as students perceive video guests as important and are more conscious of their appearance and oral communication.

Videoconferencing makes, then, a face-to-face visit possible, when a live visit is not. By removing the need for students to travel, yet still providing a two-way audio and video link, videoconference is providing educational opportunities for interactions that would not otherwise exist, saving then time and resources. This allows students to have a greater opportunity to form meaningful relationships with others who may be very different from them. They learn, as well, important communication and management skills, e.g., when they see themselves on screen and realize that is how others see them; this may lead to dress change, posture change, and poise change, all for the positive.

## **Pedagogical Implications for Videoconferencing Use**

Face-to-face communication would add a realistic element to the process of classroom-based communication. Videoconferencing would prepare learners to employ their skills of interaction in real time, which also involves the ability to acquire knowledge about the target culture (Byram, 1997a). Using this technology, students will not only be able to interact and to write to their teachers or virtual classmates, but will also be able to hear and see them as well. Yet problems such as the high cost of hardware and software and the poor quality of sound and images have kept the number of language teachers, who have so far experimented with videoconferencing in their classes, very low. This paper is, therefore, to add to the isolated reports of videoconferencing that are beginning to appear in the NBLT (Network-Based Language Teaching) area. It is believed that after identifying what videoconferencing actually involves, the different approaches to implementing the technology in the foreign language classroom will be considered.

Videoconferencing leaves the teacher out of the equation completely and enables students to practice their language skills with native speakers from the target language. Learners involved in such classes can improve their pronunciation, accuracy and fluency in the target language, like those involved in tandem exchanges, between



who conversed every week on a one-to-one basis (Butler and Fawkes, 1999). The students were given access to desktop computers with videoconference capabilities and interacted with a prearranged partner, taking turns to speak in French and English. McAndrew, Foubister, and Mayes (1996) also engaged their English students of French in one-to-one videoconferences, to co-ordinate and prepare presentations and role-plays which they were going to have to perform together at a later date.

In the light of this, we believe that videoconference-based teaching can be particularly beneficial for foreign language learning in the following ways: a) it supports a combination of interaction and reflection; b) it brings about more equal levels of participation between learners; c) it provides an authentic environment for learners; d) it facilitates the collaborative construction of knowledge; and e) it facilitates intercultural contact (Belz, 2001; Warschauer and Kern, 2000; Crystal, 2001). These characteristics will be discussed to show how they may contribute to the development of EFL communicative competence.

#### **a) Interaction and Reflection**

Advances in technology are constantly weakening any theoretical distinction between distance and face-to-face education, where learning is enhanced by the application of technologies and associated teaching and learning strategies. They consider videoconferencing as one technology that has considerable potential for education and training, and is portrayed as equivalent to face-to-face in effectiveness.

McLoughlin (1995), for example, believes that the medium helps to enhance students' sense of involvement, promote dialogue and interaction and foster collaboration between students in remote locations, where (70%) of students in her study regarded the opportunity to interact important and perceived the medium to be interactive. Fulford and Zhang (1993), too, think that interaction is a vital component for effective learning, i.e., when students have the opportunity to interact with one another and their instructors about the content, they have the opportunity to build within themselves and to communicate a shared meaning to 'make sense' of what they are learning.

Mason (1994) supports the idea that the use of videoconferencing to deliver educational programs provides a high level of psychosocial support to many types of learners and that the online interaction benefits learners at the affective level and increases motivation and interest in the subject. She believes that learners have more opportunities to express their own points of view, explain the issues in their own words and to formulate opposing or different arguments, and this leads to deep-level learning and the development of critical thinking. Videoconferencing, therefore, allows learners to interact with others and reflect on this interaction at their own pace and in real time, moving then from lower cognitive levels of learning, such as recognition and comprehension, to the higher levels of analysis, synthesis and evaluation (Moore, 1993). It has an important contribution to the style and quality of learning which takes place on-line, where each one can learn from contributions of others and thereby is engaged in an *interactional scaffold* (Kreef-Peyton, 1999). The students' reflections on their own on-line interactions help to focus students' performances and to make learners more aware of what was required of them (Feldman et Al., 2000).

#### **b) Equal Levels of Participation**

Videoconferencing brings about more equal levels of participation between learners than would normally face-to-face interactions do, with respect to shy and outgoing students, high and low level status groups, and male and female participation (Sproull and Kiesler, 1991; Warschauer, 1996), e.g., students who are shy or who are not confident in using the target language with native speakers are likely to contribute more to on-line intercultural exchanges than in face-to-face scenarios. The social dimension is reduced (Coverdale-Jones, 1998) compared to face-to-face interaction, i.e., groups from different cultures in an online contact will interact on a more 'equal footing' than they might in a face-to-face situation, thereby increasing the potential for an intense and honest process of interaction in which neither group is dominated by the other.

Likewise, Salmon (2000:19) suggests that thanks to the egalitarian nature of online communication "existing hierarchies and relationships can change and even fade". She means that participants can interact together in ways which they would not want to, or would not be able to, if they were in a face-to-face environment.

#### **c) Authentic Input**

In foreign language learning contexts, learning occurs almost exclusively in classrooms where many teachers share the same L1 and cultural background as their students, and where only a limited range of social interactions is provided. In an online classroom, on the other hand, learners are exposed to sufficient and adequate input, e.g., more complex discourse organizations, more openings/closings, routines more complex than the typical IRF routine, and more discourse and politeness markers (Lörscher, 1986; Lörscher and Schulze, 1988).

Studies indicate, as in the case of length of residence in the target community, the length of participation in online links is positively correlated with level of achievement in various areas of language ability, e.g., conversational routines for pragmatic fluency, acceptance of L2-specific request strategies, decreased verbosity through the use of fewer external modifications, appropriate mapping of speech acts to speech events, and

Bouton, 1992; House, 1996). Online settings, then, provide both quantitatively and qualitatively richer input than non-online foreign language learning settings, and learners tend to show gradual convergence to native speakers' linguistic behavior as their length of participation in online links increases.

Furthermore, educators have begun to recognize the potential of exploiting this characteristic of the video-based links even further. They believe that engaging learners in online discussions with an authentic audience will allow them to express their own beliefs and opinions and present their own personal representations of their lives and home cultures. Therefore, engaging learners in communication with a real audience about topics which are of relevance to their own lives and cultures holds potentials for intercultural learning, i.e., if learners know that their contributions to the interaction will be taken seriously by an authentic audience, then they may reflect more on themselves and their own culture and how they wish to see this presented to the outside world. In this context Christian posits that:

"There is something compelling for students to be connected to other young people in different locations. Part of it is ...a desire to explain themselves, to make a statement about who they are as they discover themselves"

(1997:63)

#### **d) Collaborative Construction of Knowledge**

The online generated interaction is seen as leading to the collaborative construction of meanings and events, by engaging participants in an interactive process which leads to the collaborative construction of knowledge rather than the traditional transfer of information from one to the other. The online discourse can be seen as being highly suited to sociocultural approaches to language learning, as it brings learners to develop an understanding of culture through interaction and collaboration with others rather than simply through the transmission of facts figures about the target language culture by their instructor. Van Lier (1996) calls for a move away from the teacher controlled IRF (initiation, response, feedback) format of classroom interaction and instead for educators to focus more on a type of classroom interaction which he refers to as transformation. The word comes from the Vygotskian belief that higher psychological functions are internalized from social interaction, and transformation refers to educationally transforming interaction whose content is determined by the learners themselves or is produced in response to the contributions of others.

Christian (1997) looked at the different types of interaction which occur in online learning environments and tried to identify which are the most suited to developing collaborative learning. He suggests that the value of such interaction happening in an online environment is that students are given an opportunity to discuss their lives and their views with distant partners who will not be so quick to judge and criticize them as their normal classmates might be which is not the case in normal face-to-face discussions. More important is that the generated interactions are co-constructed by both sides, native and nonnative as well. The nonnative learners, faced with their linguistic limitations when venturing new topics, collaboratively with their native partners build up their language through very special instances of help and conversation scaffolding.

#### **e) Intercultural Contact**

Culture learning is much more than the collection of information about the high arts, history and institutions of another country, but it is based on a definition of culture which is much more holistic and complex than that. Learners, through videoconference, are engaged in awareness raising activities which will help to develop a more anthropological definition of culture and are encouraged to look beyond cultural products and practices and look more at the significance which they hold for members of that culture, i.e., learners can develop their critical cultural awareness and look for the values and beliefs which underlie the facts and behavior which they learn about the other culture. This may help in avoiding instances of 'culture clash' as they significantly influence the outcomes of this exchange and the students' attitudes to the target culture.

#### **Conclusion**

The main idea in this article is that the application of videoconference technology should be seriously considered by teachers, especially that it is regarded as one promising field in network-based language teaching (NBLT) that with no doubt assists learners to engage in meaningful speech interactions. Such technology facilitates the development of real-life conversations, in which learners find themselves as if in a face-to-face interaction with native speakers. In other words the use of this technology will have a positive impact on learners' social skills development.

## REFERENCES

- Belz, J. A. (2001). Institutional and individual dimensions of transatlantic group work in network-based language teaching. *ReCALL*, 13(2). 213-231.
- Blum-Kulka, S. & Olshtain, E. (1986). Too many words: length of utterance and pragmatic failure. *Studies in Second Language Acquisition* 8, 47-61.
- Bouton, L. F. (1992). The interpretation of implicature in English by NNS: Does it come Automatically without being explicitly taught? In L. F. Bouton & Y. Kachru (Eds.), *Pragmatics and language learning*, (Vol 3, pp. 53-65). University of Illinois, Urbana-Champaign: Division of English as an International Language.
- Butler, M. and Fawkes, S. (1999). Videoconferencing for language learners. *Language Learning Journal. Journal of the Association for Language Learning*. June No.19 46-49.
- Byram, M. (1997). *Teaching and Assessing Intercultural Communicative Competence*. Clevedon: Multilingual Matters.
- Christian, S. (1997). *Exchanging Lives. Middle school writers online*. Illinois: National Council of Teachers of English.
- Coverdale-Jones, T. (1998). Does CMC really have a reduced social dimension? *ReCall* (1), 46-52.
- Crystal, D. (2001). *Language and the internet*. Cambridge: Cambridge university press.
- Feldman, A., Konold, C., Coulter, R., Conroy, B., Hutchison, C., & London, N. (2000). *Network science a decade later: The Internet and classroom learning*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Fulford, C. P., & Zhang, S. (1993). Perceptions of interaction: The critical predictor in distance education. *The American Journal of Distance Education*, 7(3), 8-21.
- House, J. (1996). Developing pragmatic fluency in English as a foreign language: Routines and metapragmatic awareness. *Studies in Second Language Acquisition*, 18, 225-252.
- Kasper, G. & Schmidt, R. (1996). Developmental issues in interlanguage pragmatics. *Studies in Second Language Acquisition* 18, 149- 169.
- Kreeft Peyton, J. (1999). Theory and research: Interaction via computers. In: J. Egbert and E. Hanson-Smith (Eds.), *CALL environments: Research, practice and critical issues* (pp. 17-27). Virginia: TESOL.
- Lörscher, w. (1986). Conversational Structures in the Foreign Language Classroom. In Kasper, G. 1986. *Learning, Teaching and Communication in the Foreign Language Classroom*. 11-22. Aarhus: University Press.
- Lörscher, W. & Schulze, R. (1988). On polite speaking and foreign language classroom discourse. *IRAL* 26, 183-199.
- Mason, R. (1994). The development of narrative skills and the evaluative use of modal verbs in the narratives of young non-native speakers of English. *International Journal of Applied Linguistics* 4(1): 79-99.
- McAndrew, P, Foubister, S. P. and Mayes, T. (1996). Videoconferencing in a language learning application. *Interacting with Computers*, 8(2), 207-217.
- McLoughlin, C. (1995). Tertiary literacy: A constructivist perspective. *Open Letter. Australian Journal for Adult Literacy Research and Practice* 5 (2), 27-42.
- Moore, J. D. (1993). What makes human explanations so effective? In *Proceedings of the 15th Annual Meeting of the Cognitive Science Society*, Hillsdale, NJ. Lawrence Erlbaum Associates.
- Olshtain, E., & Blum-Kulka, S. (1985). Degree of approximation: Nonnative reactions to native speech act behavior. In S. Gass & C. Madden (Eds.), *Input in second language acquisition* (pp. 303-325). New York: Newbury House.
- Salmon, G. (2000). *E-moderating: The key to teaching and learning online*. London: Kogan Page.
- Sproull, L. and Kiesler, S. (1991). *Connections: New Ways of Working in the Networked Organization*. Cambridge: MIT Press.
- Van Lier, L. (1996). *Interaction in the Language Curriculum: Awareness, Autonomy, and Authenticity*. London: Longman.
- Vygotsky, L.S. (1978). *Mind in society: the development of higher psychological processes*. Cambridge: Harvard University Press.
- Warschauer, M. (1996). Comparing Face-to-Face and Electronic Communication in the Second Language

# THE EFFECT OF USING THE IPAD AS A TEACHING TOOL TO IMPROVE THE 9TH GRADE STUDENT'S MOTIVATION AND PERFORMANCE

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## Abstract

The present study aimed to identify the effect using the iPad as an educational tool for improve the achievement motivation among 9th grade students of the State of Kuwait. The experimental method was used for this study. The sample consisted of (100) students from the 9th grade students were divided into two groups, each group have (50) students, one experimental group of (50) students and the other a control group of (50) students. The experimental group studied by using the iPad in the first semester of the academic year 2015/2016, while the control group studied in the traditional or usual manner. The study tool consisted in a questionnaire for measuring the achievement motivation between the two groups in the two measures different one before and the other after the experiment. The study results shows that there are statistically significant differences at the level of significance (0.001) between the mean scores of the experimental group who studied using an iPad and the mean scores of the control group who studied in the usual manner in favor of the experimental group. The study also concluded that there were no statistically significant differences in achievement motivation experimental group due to gender. Results of the study also showed that, there is no effect of the interaction between sex and teaching manner on achievement motivation. There were no statistically significant differences in achievements' motivation among the four groups (males in the experimental group, males in the control group, females in the experimental group, & females in the control group ) due to the interaction between sex and manner of teaching. In the other hand, it did not show any statistically significant differences in achievement motivation due to gender, while there were statistically significant differences due to the modern teaching manner that used the iPad for teaching Keywords: ( iPad as an educational tool, achievements' motivation, Educational Technology).

## 1. Introduction

The Feature of this era characterizes of a fast development in the field of technology and communications which affect all aspect of our areas lives specially in education. Teachers no longer use the traditional model of education, which focused on the conservation and memorization of knowledge. Teachers had become the center of the educational process and textbook become the primary source for information (Salem, 2010). Education in general and the process of education And learning, in particular, is part of these global changes in the scientific revolution because of affect the development of education progress on the human civilization, also it is a main factors of success. Which makes the educators and the decision-makers are put more effort to keep up with the latest educational technologies strategies, with the aim of making the education system part of the Development of the knowledge and information ( Mazen, 2004). Teaching resources become a mean tool in the active classroom to support the effective teaching strategy. So the new tools for education help teachers and students by spending less time and less effort for learning process ( Barakati, 2001).

It is very important to support learners by improving their motivation as part of the learning process. For that, best practice steps in education represent the need using best educational tools to motivate students. Having learning activities should give students more space for experience their new knowledge. Having activities and tools to motivate learners will lead to improve students' skills and education (Issawi, 2004). Teaching that focuses on improving learners performance and support competition between learners is consider as an appropriate method to achieve the educational goals. Taking into account their capabilities and preparations for learning. In

the other hand, pushing learner to perform tasks if they did not have the motivation and the ability for that will be frustrated and lead to fail and drop school. (Hana, 1984).

The educational field is trying to take advantage of the development of the technological innovations to achieve its objective. It supported the e-learning teaching strategy because it created an interactive environment that enables the learner to pursue their education in anytime and anywhere. It depends on using mobile education (M-Learning) through a wireless network and mobile devices such as tablet PCs (Tablet PC) and iPad device (Rwaili, 2014).

The motivation for achievement is a multi-dimensional system is working to raise the effort that related to achievement. It determines the nature, destination and the severity to reach the educational goals (Abdel-Hamid, 2003). It is also defined as a special case of a general motivation that refers the internal feeling that motivate learners to pay more attention to the educational situation and being more active until learning goal is achieved (Kitami and Ades, 2002).

## 2. Related work

Al-Mashaqbeh, and Al-Shurman (2015) examined the effect of using the tablet device and e-book in the first grade curriculum on student achievement as well as the impression of school administration about it. The results showed that the use of tablet device through educational programs and e-book has had a clear and positive impact on student achievement. The administrators at the school that used this method supported this teaching tool. They consider it as a good and appropriate tool in raising students' educational level.

Rwaili (2014) examined the effectiveness of the use of computer tablet and educational computer applications in the collection of the fourth grade students in mathematics development. The results of the study concluded that there are significant differences between mean scores between the two groups (tablet computer and regular method) in their achievement test the benefit of the group who studied using tablet computers and educational computer applications.

Al-Qahtani (2013) examined the impact of the use of the Ipad device to improve kindergarten student's collections in Al-Riyadh city. The result of the study showed that there are a statistically significant differences at all three levels (remembering - understanding - application) between the experimental group and the control group in favor of the experimental group.

Shamrani (2013) examined the importance of the use of smart phones and tablet to support English language learning among secondary school students. The results supported the importance of the use of smart phones and tablet computers to enhance learning English skills.

Fisher (2013) studied the role of the iPad in building collaborative learning environment in the Department of Mathematics at the University of Pepperdine in California, USA; The results showed superiority of computer tablet on a laptop in facilitating collaborative work between students and Communion.

## 3. The Importance of the Study

The importance of the study lies in:

- The iPad device in teaching and in-classroom has become more prevalent and it is being used by various segments of society. It is also, easy to use and more interesting for students
- Lack of studies and research in the field of teaching using iPad device as a tool for learning.
- Contribute to enrich the educational field in various study related to teaching methods and how to take advantage of modern technology in the educational field.
- An attempt to provide a theoretical understanding of the impact of the use of modern technology on students' motivation and achievement.
- Assist existing and responsible educators to benefit from the results and building programs help students develop motivation for achievement and the popularity of modern learning and a variety of ways.

The aimed of the study was to answer the research question:

1. Is there an effect of the use of the iPad as a teaching tool in the development of the motivation for achievement for ninth grade students?
2. Are there any statistically significant differences at the level of ( $\alpha = 0.5$ ) in the motivation for achievement between the experimental group and the control group for the study sample due to the use of the iPad device as an educational tool?
3. Are there any significant differences at the level of significance ( $\alpha = 0.05$ ) in the motivation for achievement among ninth-grade students due to the interaction between gender variable and the teaching method (traditional and experimental which used the iPad tool)?

## 4. Method

The current study was to determine the effect of using the iPad device on the motivation for achievement among ninth-grade students, the experimental method was used to because this approach was the best suited to such studies. This study required having two groups (experimental and control group) to study the impact of the independent variable on the dependent variable. The independent variable was the experimental teaching method (using the iPad device, the traditional way of teaching) and the dependent variable was the measurement of the motivation for achievement.

### 4.1 Sample and Population

The Population of the study was the current students from the ninth grade intermediate school district Ahmadi education of the Ministry of Education in Kuwait. They are distributed in middle schools of the school district and that was during the first semester of the academic year 2015/2016. The experiment was conducted on two schools from the middle stage of the Ahmadi area schools that were chosen randomly from the study population. The participants of the study were (100) ninth grade students. They were divided into two groups of (50) students each male and female: the experimental group who use the iPad device as a teaching tool and the control group who used the regular way of teaching.

#### 4.2 Instrumentation

The study tools were designed to answer the research questions. Based on the nature of the data to be collected, the approach taken in the study, and the time available, the researchers prepared the appropriate tools to achieve the objectives of the study as follows:

##### 1. iPad device and computerized educational applications.

The first PC Tablet that was commercially successful was designed by the "Apple" company. Is to share the same basic functions of the iPhone and iPod Touch, but it has a bigger screen. It is the same operating system for the iPhone and iPod Touch, iPod Nano, and an Apple TV. The device is operating by the iOS system. It has many advantages such as: easy to use and the ability to quickly switch between applications. (Souppouris A, 2014).

The following computerized educational applications were used:

- "Ibooks"
- "Keynote"
- "Teacher Kit"
- "Explain Everything"

##### 2. The motivation for achievement scale.

The researchers in the current study used a questionnaire tool that was designed in advance to measure students' motivation for achievement. It was designed by Mukhaimar and al-Absi in year 2014. It was designed to measure students' motivation toward academic achievement. On its original form, It consists off (28) each item have (5) choices. Each item has five alternatives chooses: strongly disagree, agree, I do not know, do not agree, and strongly disagree (Mukhaimar and Absi, 2014)

The researchers used the instrument tool after making few changes on it. The instrument tool was formed in the original copy with (28) items. After calculated the reliability and validity of the instrument items the researchers deleted (4) items so, the final copy of the instrument was consisted of (24) items.

In the current study, The Stability of the achievement for motivation scale was calculated. The researchers was applied the tool on a sample of 84 students (46 male, 38 female) who were chosen from the original study population. Data was analyzed to extract reliability coefficients values, the result was 0.851. It considers a high stability of that can be relied on for the purpose of the current study. It was also divided into two parts of the scale were reliability coefficient was extracted. According to the Spearman the Stability Factor was 0.807 that considered a high coefficient that the study can count on.

#### 4.3 Procedure

The researchers followed these procedures during the implementation of the current study:

- Choose the study sample (100 male and female students) from the ninth grade students from two schools in Ahmadi Educational district in Kuwait.
- The sample was divided into two groups; one was the experimental group that divided into two equal groups of males and females. The second was the traditional group that divided into two equal groups of males and females.
- A pre-test was applied for the experimental group and traditional group (male and female).
- Teachers were trained to use the software. These designed to support the core courses such as Arabic, English, mathematics and science.
- Applied the experiment by using the iPad device in teaching the experimental group only.
- The post-test was applied on both groups (the experimental and the control).
- The needed Statistical equation.

#### 5. Result and Discussion

This study was aimed to identify effect of the use of the iPad as a teaching tool in the development of the motivation for achievement for ninth grade students.

Equivalent of the two study groups (pre-test):

It was necessary to ensure the equivalency of the two study groups before starting the experiment and the placement of the experimental group to teach using the iPad device, in order to ensure access to the extent of the actual impact of the independent variable. This was done and has accordance to the following:

##### 1- equivalent of the two groups in motivation for achievement:

The scale of motivation for achievement was applied on the experimental and control groups as a pre test. The result was shown on Table (1).

Table (1)

As a result of t-test for the difference between the experimental group and the control group in motivation for achievement in the pre test

GROUP-pre	N	Mean	Std. Dev	t	df	Sig.
E-group	50	80.16	11.32	0.290	98	0.773
R-group	50	79.52	10.75			

It is clear from the table (1) as a result of t-test for the significance of differences between the experimental and control groups in motivation for achievement in the pre test, it showed no differences between the experimental and control groups in before the introduction of the independent variable on the experimental group where the value of t equal to 0.290. It is not statistically significant, which means that the experimental and control groups are equivalent on their motivation for achievement.

#### Result Related to the First Research Question:

"Is there an effect of the use of the iPad as a teaching tool in the development of the motivation for achievement for ninth grade students? ". To answer this research questions, the averages and the standard deviations was extracted as shown on table (2).

Table (2)

The averages and standard deviations for the experimental group (pre test and post test)

E-group		Mean	Std. Dev	Sig.
Pre test	50	80.16	11.32	0.001
Post test	50	105.14	7.508	

It shows that the Mean for the post test result was 105.14 compare with the pre test result mean which was 80.16. This result shows that the differents between the two means was 24.98, it indicated that the use of iPad as a teaching tool in the development of the motivation for achievement for ninth grade students was a good method. It reveald that, there was a significant differents between the experimental group students (pre-test and post-test) scores in the side of the post test scores.

#### Result Related to the Second Research Question:

"Are there any statistically significant differences at the level of ( $\alpha = 0.5$ ) in the motivation for achievement between the experimental group and the control group for the study sample due to the use of the iPad device as an educational tool?" To answer this research questions, the averages and the standard deviations was extracted as shown on table (3).



Significant difference between of the experimental and control group post test score

Groups		Mean	Std. Dev	T	Sig.
E-group	50	105.14	7.508	13.737	0.001
C-group	50	79.92	10.590		

As shown on table (3), the value of the T test was (13.737), this value was significant. It revealed that, there was a significant different between the experimental group and the control group post test scores in the side of the experimental group.

**Result Related to the Third Research Question:**

"Are there any significant differences at the level of significance ( $\alpha = 0.05$ ) in the motivation for achievement among ninth-grade students due to the interaction between gender variable and the teaching method (traditional and experimental which used the iPad tool)?" To answer this research questions, the averages and the standard deviations was extracted. The Two-way of variance that associated with the impact of the interaction between the teaching method and gender on motivation for achievement was analyzed. It illustrated that a lack of differences in motivation for achievement among the four groups (males and female in the experimental group and control group) that attributed to the gender variable. As for the interaction between the experimental teaching method is to use the iPad device in teaching and the nature of sex (male - female) in the development of achievement motivation among a sample study has revealed findings that there were no statistically significant differences between students in achievement motivation due to the nature of the interaction between sex and way of teaching where the differences value (P) equal to (0.370), a non-function. As for the interaction between the experimental teaching method and the nature of gender variable (male, female) in the development of motivation for achievement among the study sample, it revealed that there were no statistically significant differences between students in motivation for achievement due to the nature of the interaction between gender and teaching method.

**6. Conclusion and Recommendation**

The researchers believes that the results that have been reached reflects the effectiveness of the use of the iPad as an educational tool in increasing the motivation for achievement , which may indicate a tendency of students and their willingness to learn by using modern technology and educational software applications that are used by the iPad. These findings are consistent in the current study with a study (Golland, 2011) about the use of iPad (devices to improve student engagement and learning outcomes for English as a Second Language (ESL). Salem 2010) stressed the importance of the diversity of teaching methods. With the development in the field of information technology and communication that has affected our way of life in all areas, including education, the traditional way of teaching, which rely on the teacher as the center of the educational process and the textbook as a primary source of knowledge no longer the best choice for teaching. McPhee (2013) studied the impact of the use of Tablet to increase the participation of the students during the class period. The results of the study showed that there were statistically significant differences between the two teaching methods (using tablet, traditional method) for the benefits of the teaching method that used the tablet as a teaching tool.

## REFERENCES

- Abdel-Hamied, I. (2003). Achievement Motivation and its Relationship with Self-Assertiveness and Some Demographic Variables on a Sample of Office Employees. *Arab Journal of Management*. 23 (1).
- Al-Mashaqbeh, I., and Al-Shurman, M., (2015). The Adoption of Tablet and e-Textbooks: first grade core curriculum and school administration attitude, *Journal of Education and Practice*, 6(21), 188-194.
- Qahtani, A. (2013). The effect of using iPad technology to increase students' achievements of kindergarten civil civilization schools, in Riyadh. Unpublished Master Thesis. King Saud University.
- Barakati, N. (2001). The reality of the use of teaching tools for teaching mathematics for female middle school students in Mecca. Unpublished Master Thesis. College of Education, Umm Al Qura University.
- Fisher, B. Lucas, L. and Galstyan, A (2013)," The Role of iPads in Constructing Collaborative Learning Spaces", *Tech Know Learn*
- Golland, B. (2011). Affordances of iPads for improvement of learning outcomes and engagement in an ESL classroom. School of education, the University of Manchester.
- Hana, A. (1984). Psychological health. Cairo: Egyptian Al-Nahdah Library.
- Issawi, A. (2004). Landmarks psychology. (First edition), Beirut: Dar Al-Nahdah Al-Arabia.
- Kitami, J. and Adass, A. (2002). General Psychology. Amman: Dar Al-feqer.
- Mazen, H. (2004). Educational curricula, e-learning technology, and networking to build a vision for the Arab-information society future. Sixth Scientific Conference, Teacher Training. Cairo. Ain-Shams University.
- McPhee, I. Marks, L. and Marks, D. (2013) , "Examining the impact of the apple Ipad on male and female classroom engagement in a primary school in Scotland". University of the West of Scotland United Kingdom, ICITE 2013 Proceedings.
- Mukhaimar, S. and Absi, S. (2014). The impact of Reinforcement in the development of motivation for achievement among tenth grade students in Arabic grammar subject. *Al-aqsa university magazine (Humanities science)* 18(2). 145-174
- Rwaili, R. (2014). Effective use of computer tablet and educational applications in the collection of the fourth grade students in mathematics development. Unpublished Master Thesis. Graduate educational program, King Abdul Aziz University, Saudi Arabia.
- Salem, A. (2010). Tools and technology education. Saudi Arabia: Al-Rushed library.
- Shamrani, A. (2013). The importance of the use of smart phones and tablet to support English language learning among secondary school students. Unpublished Master Thesis. College of Education, Umm Al Qura University.
- Souppouris, A. (2014). Apple breaks iPhone and iPad sale records in Q1 2014. Retrieved March 7, 2014

# CONSTRUCTIVIST LEARNING PRACTICES AMONG JORDANIAN KINDERGARTEN TEACHERS

EBTESAM RABABAH

## ABSTRACT

This study aimed to explore kindergarten teachers' constructive learning practices and its relation with some variables. The participants of the study consisted of eighty kindergarten teachers, forty kindergarten teachers taught kindergarten children in public schools, and forty kindergarten teachers taught kindergarten children in private schools in Irbid city of Jordan during the (2015/2016) school year. The researcher designed an observation instrument which consisted of (37) items to collect the data about constructive learning environment. The findings revealed that the constructive learning practices of kindergarten teachers have not developed to a high level of practice, but they have achieved a moderate and low degree. Moreover, it was found that there is no relation between the prospect constructive teaching practices and teachers' experience, or their academic qualifications. However, kindergarten teachers utilized constructive teaching practices in public schools more than in private school. Some recommendations were derived.

**Keywords:** Instructional Practices, Kindergarten Teachers, Constructive Learning, Jordan

# IMPORTANCE OF MATHEMATICAL MODELING IN TEACHING MATHEMATICS

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## Abstract

Today, in engineering departments, mathematics courses such as calculus, linear algebra and differential equations are taught by mathematicians. Therefore, in their classroom teaching there are few or no applications of the concepts to real world problems. Most of the times, students do not know whether the concepts or rules taught in these courses will be used extensively in their majors or not. This situation holds true for all engineering disciplines. The real-life application of mathematics will be appreciated by students when mathematical modeling of real world problems are tackled.

In this paper some mathematical concepts are chosen and their applications to real-life problems are emphasized along with mathematical modeling for applications of mathematics.

**Keywords:** mathematical modeling, engineering mathematics, mathematical concepts, applied mathematics

## Introduction

The language of universe is mathematics. Without it to understand how the nature behaves is almost impossible. Especially in engineering education understanding mathematics thoroughly is a must. Today, in engineering departments, mathematics courses such as calculus, linear algebra and differential equations are taught by mathematicians. Therefore, in their classroom teaching, there are few or no applications of the concepts to real-world problems. Most of the times, students do not know whether the concepts or rules taught in these courses will be used extensively in their majors or not. The real-life application of mathematics will be appreciated by students when mathematical modeling of real world problems are tackled.

The author of this paper believes that unless math is applied to a real life problems it will not be completely appreciated by student. Engineering or science students would like to see a solid application of the concepts to physical world, rather than having an abstract concept. The author also claims that the main application of mathematics comes with mathematical modeling of real-life problems.

In the following part of the paper, some the most important concepts will be considered from the point of physical applications. The list is not necessarily complete, but will be a seed for a betterment of teaching mathematics courses.

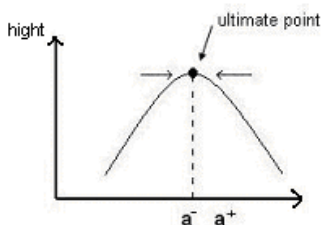
## Limit: Ultimate Reality, Goal, Target

The most important concepts in calculus is the limit. Without understanding limit properly, one will have difficulty in derivatives and integration which are the pillar of calculus.

The following expression does not mean too much for a student, unless an example of a relevant physical phenomenon is given to demonstrate its application.

$$\lim_{x \rightarrow a} f(x)$$

If we take the peak of a mountain as our ultimate point (goal) then reaching the peak of mountain from left or right (i.e. from  $a^-$  or from  $a^+$ ) will give students a good practical understanding of limit (**Figure 1**). We may be extremely close to the peak, but not necessarily just *right at the peak itself*. (Thomas, 2012)

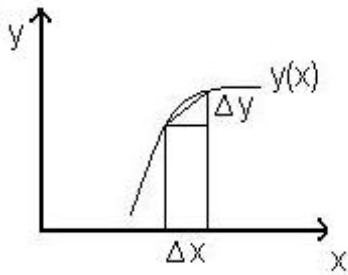


**Figure 1** Physical meaning of limit .

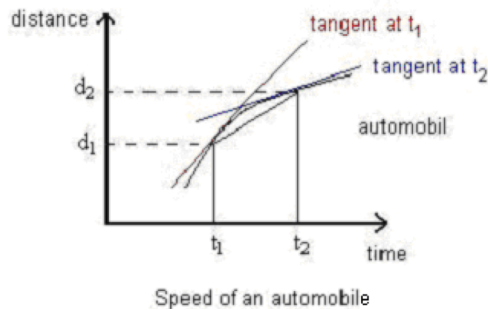
## Derivative: Rate of Change, How Fast Something is Changing

$$\lim_{\Delta x \rightarrow 0} \frac{\Delta y}{\Delta x} = \frac{dy}{dx}$$

The change of a dependent variable such as temperature, pressure, distance, velocity, and so on with respect to a tiny changes in an independent variable, for example time, is very common in the physical world. Average change is shown in **Figure 2**. In engineering, one generally is interested in instantaneous change i.e. the slope of the tangent at that point. For an automobile, the average speed between a time span of  $t_2$  and  $t_1$ , as well as instantaneous speeds at  $t_1$  and  $t_2$  times are given in **Figure 3** with necessary equations. This kind of approach to the concept of derivative would be much more beneficial for students (Bird et al, 2002)



**Figure 2** Average change :  $\Delta y/\Delta x$

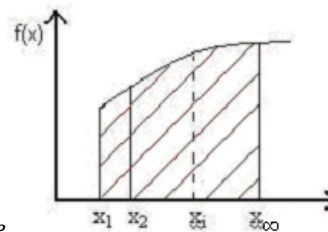


**Figure 3** Instantaneous speeds at  $t_1$  and  $t_2$

Average speed =  $(d_2 - d_1)/(t_2 - t_1)$ , instantaneous speed at  $t_1 = [d(d)/dt]_{t_1}$  and instantaneous speed at  $t_2 = [d(d)/dt]_{t_2}$

#### Integration: Growth, Summing, Growth of a Snowball

The growth of a snowball, the growth of population are good examples of integration. As can be seen in **Figure 4**, integration is simply the summation of small parts. An example of mass and energy balances over a small slice of a integral reactor and then the extension of this balance for the entire reactor is a significant process for the understanding of the concept of integration. Therefore, integration is step by step addition. (Gültekin, 1997, 2012 and 2013, Levenspiel, 1999; Bird et al, 2002; Felder and Rousseau, 2005; Fogler, 2006; Thomas, 2012,)



$$\int_{x_1}^{x_2} f(x) dx = \sum_{i=1}^{\infty} f(x_i) \Delta x_i = \text{Area under the curve}$$

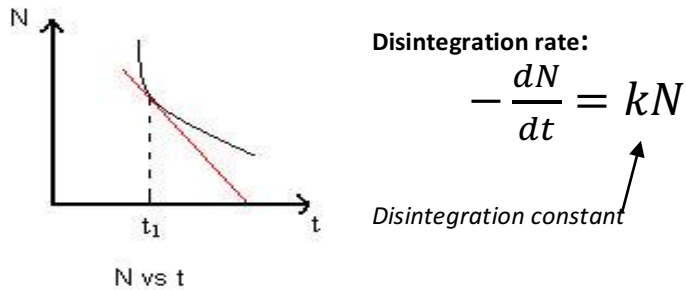
**Figure 4** Understanding of integration as an area under the curve

#### Differential Equations: Pieces of a Puzzle

$\frac{dy}{dx} = f(x)$  This expression is mathematically correct, but still students have a hard time understanding it.

Differential equations cannot be used as such in engineering applications!

For engineering and science students, a radioactive disintegration can be given as an example of differential equations. This mathematical equation also signifies the concept of derivative (change of mole number of radioactive component over an infinitesimal time). A situation for radioactive disintegration is summarized in **Figure 5** (Fogler, 2006)



We now have to find how **N** changes with time

$$-\frac{dN}{dt} = k dt \Rightarrow \ln N = -kt + \ln N_o \Rightarrow \frac{N}{N_o} = e^{-kt} \Rightarrow N = N_o e^{-kt}$$

### Differential equation

### Integrated forms

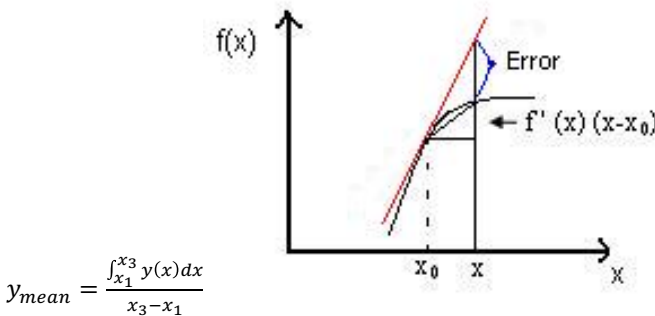
### Taylor Series: Linearization: Approximate Calculations

Engineering processes in mathematical modeling result in *non-linear* equations (either algebraic or differential from). In order to solve, for example a non-linear differential equation, for approximate solution the equation is to be linearized through Taylor Series expansion. These kinds of linearization are extremely important in process dynamics and control. The physical understanding of Taylor expansion is given in Figure 6

The first two terms in the Taylor Expansion are good enough for the approximate solution. (Stephanopoulos, 1984, Gültekin, 2012, Seborg et al, 2011 ...)

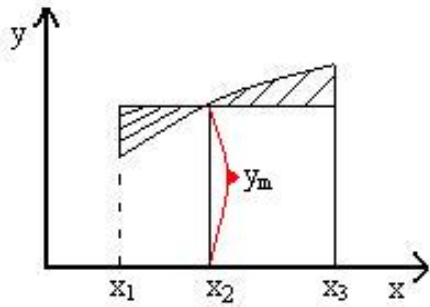
$$f(x) = f(x_o) + f'(x) \left| \frac{(x - x_o)}{1!} + f''(x) \frac{(x - x_o)^2}{2!} \right|_{x_o} + \dots + f^{(n)} \frac{(x - x_o)^n}{n!}$$

In most of the time we have to linearize Arrhenius Expression  $k = k_o e^{-E/RT}$  (non-linear in T)



**Figure 6** Physical understanding of Taylor Expansion

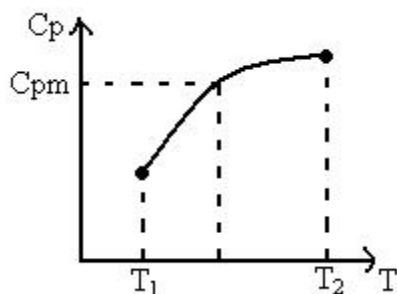
### Mean Value Theorem



**Figure 7** Graphical representation of Mean Value Theorem

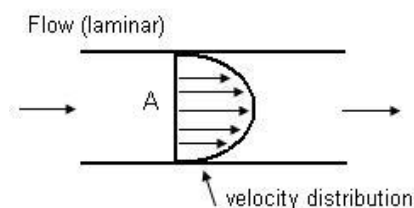
In chemical engineering, for example, certain values (e.g.  $C_p$ =specific heat,  $v$ =velocity, and so on) change with changes in some other variables. Specific heat,  $C_p=f(T)$  or velocity in a pipe,  $v=f(A)$ . The geometrical understanding of mean value theorem is given in Figure 7. In **Figures 8** and 9, we can see how to calculate mean specific heat  $C_{pm}$  for the temperature range of  $T_1$  and  $T_2$  [Tester and Modell, 1997] , and mean velocity (McCabe et al.,1993) , respectively.





$$C_{pm} = \frac{\int_{T_1}^{T_2} C_p(T) dt}{T_2 - T_1}$$

**Figure 8** Change of specific heat with temperature



$$\vartheta_{mean} = \frac{\int_A \vartheta dA}{A}$$

**Figure 9** Velocity distributions in a pipe for laminar flow.

### Mathematical Modeling

The math modeling is simply representation of the real-life phenomenon by mathematical equations. This means that one can predict the result of a physical or chemical process without going to laboratory. Just understanding of the phenomenon and mathematics is good enough for mathematical modeling. No doubt that applications of mathematics is a good practice to use in mathematical modeling.

It is highly recommended that for a good appreciation of mathematics, mathematical modeling should be a core course in all high school all over the world. So that once students are at the university, she/he will appreciate the importance of mathematics for the major chosen.

### Conclusions

Mathematics courses given in engineering departments must not only focus on concepts, but must also apply these concepts to real life engineering problems, so that the students understand the importance of mathematics in engineering.

Mathematical modeling is a good area for the application of mathematics to real-life problems. Mathematical modeling could be a must course in high schools before student comes to university.

### Acknowledgement

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### REFERENCES

- Bequette, B.W., "Process Control: Modeling, Design and Simulation", Prentice Hall, (2003)
- Bird, R.B., Stewart, W.E., Lightfoot, E.N., "Transport Phenomena, 2E, Wiley, (2002)
- Dale E. Seborg D.E. Edgar, T.F. Mellichamp, D.A. Doyle, F.J. "Process Dynamics and Control", 3E, Wiley, (2011)
- Felder, R.M. and Rousseau, R.W. , "Elementary Principles of Chemical Processes", 3E, Wiley, (2005)
- Fogler, H.S. "Elements of Chemical Reaction Engineering", 4E, Prentice Hall, (2006)

- Gültekin, S., Gülen, J. "Kimya Mühendisliğinde Matematiksel Modelleme (*Mathematical Modeling in Chemical Engineering, 2E.*)", Yıldız Technical University, Chemical Eng. Dept., (1997)
- Gültekin, S. "Mühendislik ve Fen Uygulamalarında MATLAB ile Nümerik Analiz" (*Numerical Analysis with MATLAB and its Applications to Engineering and Sciences*). Papatya Yayıncılık, İstanbul, (2012) (in Turkish)
- Gültekin, S. (Editor) "Kimya Mühendisliğine Giriş" (*Introduction to Chemical Engineering*) Papatya Yayıncılık, İstanbul, (2013) (in Turkish)
- Levenspiel, O., Chemical Reaction Engineering, 3E, , Wiley,(1999)
- McCabe, W.L, Smith, J.C., and Harriot, P., "Unit Operations of Chemical Engineering", McGraw Hill, (1993)
- Stephanopoulos, G. "Chemical Process Control", Prentice Hall, (1984)
- Tester J.F. and Modell, M. "Thermodynamics and Its applications", 3<sup>rd</sup> Ed. Prentice Hall, (1997)
- Thomas, G.B., "Calculus", 12E, Pearson, (2010)

# METHODS OF OVERCOMING PSYCHOLOGICAL BARRIERS IN COMMUNICATION IN KAZAKH LANGUAGE

**AIGERIM ALIASKAR**

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## **Abstract**

Language is a tool of speaking and relationship and researchers are investigating this language deeply from different aspects. However, teaching language is one of the most difficult and multilateral processes. Especially there are shortcomings in teaching system of Kazakh language, in studying of grammar and in use of methods. The state politics aims to expand the usage of state language, and to raise the application Kazakh language to highest level. In this regard, due to increasing interest in this language the demands from society became clear. One of them is to teach people state Kazakh language very quickly to people who speak in Russian. Therefore, it is very important to research the most effective and easy ways of teaching and learning languages.

What can we see from current school practice in Kazakhstan? A typical graduate of secondary school has well developed linguistic skill, he knows thousands of words, he can read books, however he cannot speak in Kazakh clearly. Why? Nowadays language teaching should not be limited just with lexical meaning. Language teaching will yield its fruits only if current tendencies linguistics and act in practice are applied.

The recent scientific works in this field discovered that psychology should be taken into consideration in language studies. Integrating psychology into language teaching allows us to prepare an effective method by considering each individual's mind, his/her background, unsuccessful experiences in learning languages, and level of perception. The psychology and psychotherapy approach is not widely used in teaching Kazakh language yet, but I will apply this method in educating students at Nazarbayev University and conduct survey. By evaluating all collected data, I will be able to give practical recommendations to improve second language acquisition and learning in Kazakhstan and beyond.

In a typical Kazakh Language class in secondary school, typical rigid teacher enters the classroom with boring long text and demands students to learn grammar rules by rote. This is a usual picture on Kazakh lessons in schools and this is the most awful way of teaching. Currently, teaching methods focus on making students to grind texts, grammar rules, structure of grammar. What teachers omit is the psychological aspects of students, who are not motivated to learn and use the language. I propose that in teaching it is necessary to include treatment of psychological barriers that students face with and to consider their interests and preferences.

This paper will be organized in a following way. Firstly, I will demonstrate some of the most widespread barriers and describe them one by one. Secondly, I will illustrate methodology that I used for the research. Thirdly, I will describe findings of this project and provide my suggestions. Finally, I will state on which topics further research should focus on.

To begin with, there are several types of barriers in secondary language learning. As was already mentioned in the introductory part there are a number of factors that discourage people to learn Kazakh language. The most significant barriers faced by people who are willing to learn a new language include, but are not limited to social and cultural environment. For instance, people who grew up in purely Russian language environment consider Kazakh language as the language that is not prestigious and mostly is being spoken by rural inhabitants. Nowadays, in a modern Kazakhstan people are being witnesses of Kazakh language speakers having less income and not being as educated as Russian language possessors. Moreover, the cultural aspect of language learning is equally crucial as social. People in many cases struggle when they switch from one language family to another. Since Kazakh language belongs to the group of Turkic language group, acquisition of it is more struggling for Slavic language speaking population. Furthermore, we should not forget about physiological and biological obstacles in language learning. As was illustrated by (article) it is harder to adopt to new language when individual becomes older since his/her physiology is got used speaking a native language. In addition, cognitive perception decreases as chemical processes in brain are

not as efficient as in youth that leads to slower understanding and, thus, learning. All of the discussed barriers are external to human, and pedagogical and teaching methods are not enough to overcome these obstacles.

On the other hand, effectiveness of language teaching can be increased by solving internal problems. Psychological barriers are a particular condition of an individual that does not allow him/her to be an active person, to perform one or another kind of activity, or hinders him from freely communicating. This psychological condition generally caused by unusual anxiety, which based on specific problems and actual situation.

According to the research (2) psychological barriers often hinders learners from second language acquisition. They are mainly individual's character, unsuccessful experience of language learning, fears and uncertainty. This research mainly focuses on psychological barriers in communication. Having discussed the most significant factors in language learning, in the next paragraphs I will discuss my methodology.

First of all, in order to learn Russian speaking population's opinion on Kazakh language teaching I conducted survey among students of Nazarbayev University, a brand new western style college where Kazakhstan's top students study. The participants were language learners with basic level of Kazakh. All of these students studied language at secondary school, but could not completely learn. Some of them can understand Kazakh, but struggle to speak and communicate in this language. Our aim is to identify why some of the participants were successful in learning Kazakh, and developed their skills at school, and why others could not achieve good results. In this survey, students from two groups were participated and in total 30 people were involved. The questionnaire consisted of questions regarding age, gender, and the amount of years they were learning Kazakh language. They were asked about their interests, and past experience in language learning. In addition, respondents described the suitable methods that they faced, the methods that were most helpful and, in contrary, useless, and finally their learning environment. In short, we tried to discover efficacy of language teaching methods, psychological factors and their effect on learners. Since the sample consists of people who are Russian speaking and who were unsuccessful in language learning, I believe that our survey gives justified results.

The findings of the survey were interesting and were in line with our expectations. Around 80% of respondents indicated that the main reason for ineffective language learning is boring teaching methods and incomprehensible study materials. In additions, it was mentioned that interest in learning Kazakh was low because of inappropriate teaching approaches and improper study environments. Moreover, 75% of students hesitates communicating in Kazakh because they fear to speak incorrectly because others will laugh at them in this case. This is an example of how psychological factors negatively affects language learners. More than half of the participants indicated that low interest in Kazakh language was caused by low social status of the state language.

As it can be seen, by improving damaged image of Kazakh language we can increase demand for it. From history it is known that during USSR all the documentation and governance was performed in Russian language. When rural people who speak Kazakh language first started moving to urban areas they were met negativity by local urban citizens. This resulted in Kazakh language's social status decrease and caused fear and complexes of speaking it. Despite the support from current government, Kazakh language still has reputation of a language of middle and lower layers of society that results in discouragement of youth of learning Kazakh language. Even though governmental structures and organizations require an adequate knowledge of both written and oral communication skills of Kazakh language, in practice even the ones who do know and can communicate effectively do not use it on everyday basis. Ames (3) motivation can lead people to achieve more and overcome their own fears. Although language teacher cannot directly change this situation, at least we as a teachers can suggest a solution. In order to handle the problem of social barrier it is necessary to develop and follow good strategic plan. Among other post USSR countries only few still use Russian as primary and most spoken language within its borders. Some countries stopped teaching in Russian language by using historical events. The example of this can be Poland that used media and all kinds of available resources to demotivate people to speak Russian. Others such as Azerbaijan and Uzbekistan shifted to Latin alphabet in order to decrease the popularity of Russian language. It might not be as easy to perform the same task in Kazakhstan as it will require the huge use of resources both economical and psychological because it will be harder to adapt to elder people. One of my recommendations is to increase the research and scientific works in Kazakh language. No one will be interested in learning and practicing a language that has little advantages in both self-development and commercial means. I believe that if higher level businessmen, governmental representatives, and university collegiate starts to publicly speak and use Kazakh language it will be the best "advertisement" and sent a signal of motivation that will increase its status. Therefore, it is exceedingly important to motivate the society to speak Kazakh language despite the environmental challenges.

Regarding the psychological barriers, it is understandable that entirely eliminating barriers is impossible to do, but it is possible to influence students during the classes. I believe that the work of the teacher encompasses the responsibility that we have on our students. I want teachers to be not only teachers, but also psychologists who will tackle the problems that they have in their studies. On the example of my students, as I said, they had problems regarding fear of being ashamed while speaking incorrectly and they had unpleasant experience during their previous study, particularly in schools. Many of them did not want to speak Kazakh because of their temperaments, as these people were not willing to practice language, so this disrupts in-class discussions because discussions are limited to only few people. In this case, I believe teacher need to encourage such people and be maximally student-orientated, explaining them that fears are irrelevant on the lessons. In addition, teachers need to create an atmosphere of peace and comfort that would encourage people to speak by making them feel no stress. What I found in my research is that students who were taught the lesson based on their preferences had better results in learning language than the group that was studying using standard curriculum. Therefore, it is very important to perceive students, their preferences and wishes, consider their abilities and mindsets. The good method is to mimic psychologists' approach that asks people to understand their selves deeply, and this will help people to understand how to effectively learn the language.

To conclude, I demonstrated that there are some barriers that do not let people effectively communicate in Kazakh language or in another language. I found out that psychological barriers was one of the most important one. I suggest that teaching methods should use various approaches to attract students' interest and they should involve treatment of psychological barriers. Nevertheless, some barriers cannot be overcome by this treatment. For instance, social and cultural barriers need to be treated by other means. Further research should focus on the ways how the status of the Kazakh language may be increased in society. This will help to overcome social barriers and it would lead to more people speaking in Kazakh language.

## REFERENCES

1. Jiyoun Choi, Anne Cutler, Mirjam Broersma. Early development of abstract language knowledge: evidence from perception–production transfer of birth-language memory. *Royal Society Open Science*, 2017.
2. Boev I.V. *Anomaly of personalit*, Moscow, 2001.
3. Ames C., *Classrooms, goals, structures, and student motivation*. *Journal of Educational Psychology*. 1992.

# WHAT KIND OF LEARNING IS NECESSARY FOR HIGHER EDUCATION?

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### **Abstract**

Learning refers to new knowledge, skills, values, behaviour, and/or preferences, and should involve synthesizing different types of information. Different approaches for learning in higher education explore what should be done while learning and why those activities should be performed. Professors and students in higher education have tried to find a successful method for learning. Regardless of the method, the quality of learning should also be considered. One conceptualization of quality is Surface to Deep learning, where a surface approach focuses on memorizing information for recall and a deep approach focuses on understanding information for application in different contexts. Although students engage in both Deep and Surface Learning, these approaches are not properties of the learner but rather are expressed by an instructor. For a higher education setting though, deep learning may be of greater benefit. In this paper then, we will explore the primary motivation, attributes, and results of deep and surface approach to learning and identify why deep learning may be more suited to higher education.

**Keywords:** Surface learning, Deep learning, Higher Education, Learning strategies, Students' motivation

# IS TALLNESS AN EFFECTIVE COMPONENT ON HIGH JUMP PERFORMANCE?

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## **Abstract**

The aim of this study was to examine whether there is a relation between tallness and performance of high jumpers. The research group was composed by 176 high jumpers (men=90, women=86) who have taken place in European Athletics 2016 ranking list. Athletes' informations which are date of birth, date of the competition, best performance of the season (SB), height and body mass (BM) have obtained from European Athletics web site and databases of athletics. Means and standard deviations (SD) were computed for the age (men=26.3years, women=25.8years), height (men=1.91m, women=1.79m), BM (men=76kg, women=61.3kg), body mass index (BMI) (men=20.8, women=19.2) and SB (men=2.22m, women=1.79m) one by one for both gender. Pearson correlation statistic ( $r$ ) had been used for the relation between height and SB, also it was found coefficients of determination ( $r^2$ ) for these variables. Statistical significance was set at  $p<0.05$ . The jump performances of athletes are range from 2.14 m to 2.39 m for male and from 1.80m to 2.00m for female athletes. When the relations between variables have been examined, it was found a significantly correlation between SB and tallness values for female jumpers ( $r=0.42$ ,  $p<0.05$ ;  $r^2=0.18$ ), while the same relation was not observed for male jumpers. According to the results, tallness is not an effective component for the men high jumpers who can jump mean 2.22m with mean height 1.91m. Whereas tallness is an effective component for the women high jumpers who can jump mean 1.88m with mean height 1.79m. Besides, it may be stated that 18% of the female high jump performance variation can be explained by tallness. For the other 82 % it needs other variables to clarify the variation of high jump performance for female.

**Keywords:** height, high jumper, performance components

## **Introduction**

It was being wondered that the relationship between sport performance level and anthropometric feature of athlete by scientists and coaches for all sport event. Therefore the researchers have examined the relationship, so they have profiled features of athlete related to the sport events. The profiling studies usually cover the elite athletes as a study group because of their excellent physique for their sport. Eventually, thanks to profiling, the coaches can compare their athlete's features with norms of elite athletes. For the jumping events of athletics, especially the high jump requires to be tall, the long lower limbs and a high crural index. Also the high jumpers must keep their total body mass low, because they have to work in opposite to gravity to maximize jump height (Ackland et al. 2009). In the high jump, the performance which is height of the cleared bar by athlete that consists from the sum of three separate heights. These are the take-off height (H1), the flight height (H2) and the clearance height (H3). The H1 is the height of the athlete's centre of gravity at the instant of take-off (Hay 1985). Hay has stated that H1 contributes approximately 68% and 61% of height of bar (women, men, respectively) in his study. Abbot and Collins (2002) have declared the some values which can be used in the talent selection process related to the performance components of different sports. According to this study, the high jump includes the components which are height (20%), sitting height (-20%), weight (-8%) and vertical jump (52%). Daniel (2012) has examined the relationships between the performance of high jumpers and their individual features who was competed in the Olympic Games. It was noticed that the Olympic medallists are below the mean values in terms of athletes' height in this study. The aim of this study was to examine whether there is a relation between tallness and performance of high jumpers in the Europe.

## **Method**

The research group was composed by 176 high jumpers (men=90, women=86) who have taken place in European Athletics 2016 ranking list. Athletes' informations which are date of birth, date of the competition, best performance of the season (SB), height and body mass (BM) have obtained from European Athletics web site (Athletics 2016) and databases of athletics (Spiriev 2016; SportsReference 2017). Means and standard deviations (SD) were computed for the age (men=26.3years, women=25.8years), height (men=1.91m, women=1.79m), body mass (men=76kg, women=61.3kg), body mass index (BMI) (men=20.8, women=19.2) and performance-SB (men=2.22m,



women=1.79m) as well as relative performance one by one for both gender. The relative performance was obtained which is the difference between the performance and height of athlete. Pearson correlation statistic ( $r$ ) had been used for the relation between height and SB, also it was found coefficients of determination ( $r^2$ ) for these variables. Statistical significance was set at  $p < 0.05$ .

## Results

The jump performances of athletes are ranged from 2.14 m to 2.39 m for male and from 1.80m to 2.00m for female athletes. It was found similarity between the genders in term of the age ( $p > 0.05$ ). Whereas it was observed that there are differences for BMI and the relative performance. The men have shown 31 cm relative performance, the women have 9 cm ( $p < 0.05$ ). The BMI is 19.2 for women and 20.8 for men ( $p < 0.05$ ).

When the relations between variables have been examined, it was found a significantly correlation between the performance and tallness values for female jumpers ( $r = 0.42$ ,  $p < 0.05$ ;  $r^2 = 0.18$ ), while the same relation was not observed for male jumpers.

Table 1. Descriptive data of female high jumpers

Women	n	Mean	SD	Minimum	Maximum	Range
Age (year)		25.8	5.1	15	42	27
Height (m)		1.79	0.06	1.64	1.94	0.30
Body Mass (kg)	86	61.3	57	48	77	29
BMI (kg/m <sup>2</sup> )		19.2	1.5	15.1	24.3	9.2
Performance (m)		1.88	0.06	1.80	2.00	0.20
Relative performance (m)		0.09	0.06	-0.04	0.25	0.29

Table 2. Descriptive data of male high jumpers

Men	n	Mean	SD	Minimum	Maximum	Range
Age (year)		26.3	4.9	17	38	21
Height (m)		1.91	0.06	1.73	2.06	0.33
Body Mass (kg)	90	76.0	6.2	60	90	30
BMI (kg/m <sup>2</sup> )		20.8	1.4	17.1	23.8	6.7
Performance (m)		2.22	0.06	2.14	2.39	0.25
Relative performance (m)		0.31	0.08	0.14	0.52	0.38

Table 3. The differences between genders in terms of age, BMI and relative performance

	Gender	n	Mean	Std. Deviation	p
Age	M	90	26.3	4.9	0.51
	W	86	25.8	5.1	
BMI	M	90	20.8	1.4	0.00
	W	86	19.2	1.5	
Relative Performance	M	90	0.31	0.08	0.00
	W	86	0,09	0,06	

Table 4. The relationships between athletes' performances and variables

Performance	n	Age	Height	Body Mass	BMI
W-EA-2016 Toplist	r	-0.04	0.42**	0.20	-0.12
	p	0.73	0.00	0.06	0.27
	r <sup>2</sup>	-	0.18		-
M-EA-2016 Toplist	r	0.12	0.10	-0.03	-0.14
	p	0.28	0.33	0.82	0.18

\*\* $p < 0.05$

## Discussion

In the current study, the athletes' height mean values are 1.79 m for women, 1.91 m for men. The body mass of athletes is 61.3 kg for women and 76 kg for men. As reported previously, the height values of elite athletes have 1.79 m for women and 1.90 for men, the weight values of them are 62 kg and 78 kg (respectively). This study has also noticed that the women jumped 1.86 m and the men jumped 2.27 m. These results have shown similarities with the current study results.

According to the results of correlation statistics, the tallness is not an effective component for the men high jumpers who can jump mean 2.22m with mean height 1.91m ( $r=0.10$ ,  $p>0.05$ ). Whereas tallness is an effective component for the women high jumpers who can jump mean 1.88m with mean height 1.79m ( $r=0.42$ ,  $p<0.05$ ). Besides, it may be stated that 18% of the female high jump performance variation can be explained by tallness. For the other 82 % it needs other variables to clarify the variation of high jump performance for female. The relationship, which is between body height and performance, was found by Burcar (2012) ( $r=0.59$ ,  $p<0.05$ ) for youth athletes. The percentage (18%) in the current study has shown similarity with the previous study which has been examined by Abbot and Collins (2002). They have clarified that the height of athlete effects 20% to the jump performance related to the components of high jump. The result of the current study has provided the literature.

In conclusion, the tallness is an effective component for women but it is not for men, in terms of the elite high jumpers in Europe.

## References

- Abbott, A. & Collins, D., 2002. A theoretical and empirical analysis of a state of the art talent identification model. *High ability studies*, 13(2). Available at: <http://www.tandfonline.com/doi/abs/10.1080/1359813022000048798> [Accessed January 28, 2014].
- Ackland, T.R., Elliott, B. & Bloomfield, J., 2009. *Applied Anatomy and Biomechanics in Sport* 2nd ed., Human Kinetics.
- Athletics, E., 2016. Athletes Database and Ranking List. Available at: [www.european-athletics.org](http://www.european-athletics.org) [Accessed February 19, 2017].
- Daniel, G., 2012. Study On High Jumpers On The Word. *Ovidius University Annals, Series Physical Education and Sport/Science, Movement and Health*, 12(2), pp.325–332.
- Hay, J.G., 1985. *The biomechanics of sports techniques*, Prentice Hall.
- Spiriev, B., 2016. Athletics Database. Available at: [www.all-athletics.com](http://www.all-athletics.com) [Accessed February 19, 2017].
- SportsReference, 2017. Olympic Sports. Available at: <http://www.sports-reference.com/olympics/> [Accessed February 19, 2017].
- Željko Burcar, 2012. The Impact Of Some Morphological Characteristics And Motor Abilities To High Jump Results Of 14 Year 's Old Pupils. *Acta Kinesiologica*, 6(2), pp.75–79.

# AN INVESTIGATION OF THE RELATIONSHIP BETWEEN SPORTSMANSHIP BEHAVIOR OF STUDENTS IN PHYSICAL EDUCATION COURSE AND THEIR RESPECT LEVEL

YAKUP KOÇ AND SAMED YENİÇERİ

## ABSTRACT

When you look at the definition of sportsmanship, it is seen that sportsmanship is related to the individual's respectful nature. But in sportsmanship and fair-play work, there is no study that directly examines the relationship between sportsmanship and respect. Therefore, it is thought that the examination of the level of relationship between sportsmanship and respect is needed. The aim of this study is to examine relationship between the physical education course sportspersonship behaviors and respect levels for high school students. The sample of study consists of randomly selected 505 high school students (215 female and 290 male) attending state schools in the province of İstanbul (Başakşehir district) in 2016-2017 academic year. "Physical Education Course Sportspersonship Behavior Scale" (PECSBS) developed by Koç (2013), "Respect Scale" developed by Yazıcı & Yazıcı (2015) and personal information form created by the researcher were used in the study. Reliability and validity tests of the scales were done. The scores the students obtained in the scales were reexamined in accordance with independent variables. And relationship between the values of scales was tested. For the assessment of the data, SPSS 15 and LISREL 8,7 programs were employed.

It was found that the scales was valid and reliable and could be used for high school students. Sportsmanship behaviors significantly differed according to the gender of the students (in favor of the girls), the grade (in favor of 10th grade), school success (in favor of good level) and the type of sports most interested (in favor of physically noncontact sports). It was understood that the scale scores of the students are not significantly different according to the family economic conditions. It was found that physical education course sportspersonship behaviors (Realization of Positive Behavior, Avoidance from Negative Behavior) are significantly related to respect levels (Cosmopolitanism, Communitarianism) positively. It is believed that the implementation of activities aimed at improving the level of respect in schools will be helpful in improving sportsmanship behaviors.

It is suggested to work in different types of groups on the grounds of the lack of studies that show the level of relationship between sportsmanship behaviors and the level of respect.

**Keywords:** Physical Education Course, Sportsmanship Behavior, Respect Level

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# EEG COMPLEXITY AND HEART RATE VARIABILITY TO EMOTIONAL VIDEO CLIPS

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## Abstract

It has been suggested that emotion perception decreases coherence between prefrontal and posterior associative cortices. In this study we explore this possibility by means of the complexity of EEG signals during presentation of emotionally positive and negative video clips. Since EEG complexity is widely considered as an indicator of cortical de-synchronization, we expected an increase of EEG complexity during emotional perception when compared with emotionally neutral conditions. In addition, we expected a modulation of the EEG complexity depending on the specific emotion experienced by participants. We estimated the induced EEG fractal dimension (FD) and the heart rate variability (HRV) of 22 participants while viewing short video clips in which the main emotional content could be disgust, humor, fear or neutral. As expected, our results showed that video clips with emotional content elicited EEG signals with higher FD than those with neutral content. Interestingly, we found that humoristic videos elicited the most complex EEG responses while the scaring video clips produced the lowest complex EEG responses. In addition, we observed a similar pattern of results when we examined the HRV of participants; that is, the highest HRV was found to humoristic and the lowest to neutral videos. The study extends findings showing that emotion perception arises from less coherent cortico-cortical interactions. Importantly, we also show that complex dynamical patterns at cortical level related to cardiovascular patterns of activity.

**Keywords:** EEG Complexity, Heart rate variability, Emotion

# CHALLENGES, STRESS AND COPING STRATEGIES FOR SAUDI ARABIAN STUDENTS IN THE UK

ADIL ALGHAMDI

## ABSTRACT

Saudi Arabian students have constituted a growing population in the UK HE in the past ten years. These students will experience the challenges of adapting to a new culture and an unfamiliar educational system. These challenges can in some instances be overwhelming and can lead students to experience stress and in some cases mental health problems. Although some research has focused on Asian international students' experiences, a limited amount has looked at Saudi students. Given the high number of Saudi students entering into the UK HE system, it is important to investigate the challenges that are faced by these students. It is also critical to investigate the strategies they use to address those challenges, in order to seek ways of promoting positive coping strategies, of improving academic performance and wellbeing in this group.

The aim of this research is to investigate the transitions of moving to and studying in the UK for Saudi students. It investigates the experiences that Saudi students report as challenges. It also looks at coping strategies that they use when they face challenges and the perceived consequences on their sense of self and identities.

A qualitative interview study using Interpretative Phenomenological Analysis (IPA) was conducted with 8 students. This included 5 females and 3 males, aged between (29 – 34) currently studying a HE degree. The development of the interview schedule was based on IPA principles and the interview questions covered experiences in the premoving stage, arrival and life in the UK, and planning return.

Analysis of the data identified 16 main themes. Some of these themes refer to experiences of being an international student, as documented in the literature. Other themes reflect experiences specific to the Saudi group, such as Anticipations, Structures and Planning, Issue of representing home culture, Gender Issues, Changes and awareness of self.

**Keywords:** Challenges, Stress and Coping Strategies, Saudi Arabian Students in the UK, transitions of moving to, studying in the UK

