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probability collectives algorithm for solving knapsack problem

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الملخص:

تعد مشكلات التحسين التوافقي شائعة جدًا في مختلف المجالات. حيث تعمل على إيجاد أفضل حل ممكن من مجموعة محدودة من الكائنات. ببساطة، إنها عملية تحديد الحلول المثلى من مجموعة من مجموعات البيانات المتاحة لمشكلة معينة. تعتبر مشكلة الحقيبة (KP) مشكلة مألوفة ومدروسة في التحسين التوافقي، حيث يتم استخدامها لنمذجة المواقف الصناعية أو القرارات المالية. في هذا البحث، قمنا بتطبيق منهج الخوارزمية الجماعية الاحتمالية (PCA) لحل مسائل الحقيبة (KP)، وقد حققت أداءً عاليًا. الكلمات المفتاحية: مشكلة الحقيبة، التحسين التوافقي، الخوارزمية الجماعية الاحتمالية.

Abstract:

Combinatorial optimization problems are very common in various fields. It involves finding the best possible solution from a finite set of objects. Simply put, it is the process of identifying the optimal solutions from a set of available data sets for a particular problem. The knapsack problem (KP) is considered a familiar and thoughtful problem in combinatorial optimization, where it is used to model industrial situations or financial decisions. In this paper, we implement the approach of a Probability collective algorithm (PCA) for solving the knapsack problems (KP), which has achieved high performance.

Keywords: knapsack problem, Combinatorial optimization, Probability collective algorithm, NP-Complete.

Introduction:

In the framework of Collective Intelligence (COIN), the Artificial Intelligence (AI) tool indicated as Probability Collectives (PC) is becoming common for modeling and controlling distributed Multi-Agent Systems (MAS) and also deep connections to Game Theory, Statistical Physics, and Optimization[1]. The PC theory first proposed by David Wolpert in 1999, considers an effectual method of sampling the probability space, changing the problem into the convex space of distribution. PC allocates probability values to each agent's moves, in contrast to stochastic approaches, For example, Genetic Algorithms (GA), Swarm Optimization and Simulated Annealing (SA), instead of deciding over the agent's moves/set of actions [15]. Every agent selects a particular action dependent on its strategy set having the highest probability and then updates its probability distribution in each iteration, which outcomes in optimizing the world utility or system objective that depends on the prior knowledge of the actions/strategies of all other agents. Thus, the process continues to find the best solution until the convergence reaches the global solution or one of the stopping criteria[2].

The most popular form of KP is the single constraint binary variant, in which we are given N items, each with a profit p_i and a weight w_i , with $i = 1, \dots, N$, and a knapsack capacity C . The problem is to select a subset of objects such that their weight does not exceed C while returning the highest total profit [3].

Literature Review:

Amol C. Adamuthe and his team utilized the harmony search (HS) algorithm to address both single and multi-objective knapsack issues[4]. They conducted experiments on 43 problem instances, taken from three different datasets, and were able to generate notably better results.

Their study is a significant contribution to the field of optimization since the knapsack problem is one of the most extensively researched combinatorial optimization problems. The harmony search algorithm used in their research is a heuristic optimization technique that has shown promising results in solving a variety of complex problems.

Sara Salem utilized the quadratic interpolation optimization algorithm to solve the knapsack problem with high accuracy[5]. The algorithm works by converting the continuous search space of the recently proposed quadratic interpolation optimization (QIO) into a discrete search space using various V-shaped and S-shaped transfer functions. Through the use of different instances, this study achieved the best possible results.

In a study conducted by Arish Pitchai and his team[6], they have proposed a new approach to solve the knapsack problem. They have named this approach as QWGA "Quantum Walk Genetic Algorithm." This algorithm is based on qubit representation and superposition phenomenon which are the counter-intuitive characteristics of quantum mechanics. The results of this study showed that the proposed algorithm has achieved higher performance compared to the quantum algorithm based on rotation operators.

Ravneil Nand and Priynka Sharma have developed a new approach that solves the Multi Knapsack Problem (MKP) effectively[7]. This approach combines two algorithms - the Firefly Algorithm (FA) and the Genetic Algorithm (GA) to achieve optimal results. The system they created using this approach has shown remarkable performance compared to using each algorithm separately.

Indresh Kumar Gupta has developed a new algorithm that combines the genetic algorithm (GA) and gravitational search algorithm (GSA) to solve the multidimensional knapsack problem (MDKP)[8]. In this approach, the GA is used for global search while the GSA is used for local search. The algorithm selects $k\%$ of the population after creating individuals using the GA algorithm, and the rest $(100-k)\%$ of the population is selected using the GSA algorithm. The top $k\%$ of the population is then chosen as the surviving population for the new generation of GA. The combination of GA and GSA yielded better results compared to using each algorithm separately.

Ameen Shaheen and Azzam Sleit investigated various algorithms as a potential solution for the Knapsack problem[9]. They compared the outcomes of each algorithm and determined the most efficient one. The algorithms evaluated were the genetic algorithm, branch and bound algorithm, greedy algorithm, and dynamic programming algorithm. Upon applying these algorithms to the same data and scrutinizing the results,

they concluded that the genetic algorithm was the most effective in resolving the problem.

In their study, Frumen Olivas and colleagues used the fuzzy hyper-heuristics (FHH) technique to solve the knapsack problem[10]. This approach is a potent technique that combines low-level heuristics to solve optimization problems. The researchers compared a fuzzy hyper-heuristic model optimized by a genetic algorithm with three traditional selection hyper-heuristic models. All these approaches were applied to the same set of low-level heuristics. The techniques showed a high performance in solving the knapsack problem.

Shang Gao and colleagues utilized Estimation of Distribution Algorithms (EDAs) to tackle the knapsack problem[11]. The approach involves determining the probability of individual distributions in the next generation, the next generation being formed through random sampling. This technique is highly reliable and effective in solving the knapsack problem.

Yazeed Ghadi et al have developed a new approach to solve the knapsack problem[12]. The Group Counseling Optimizer (GCO) is an emerging evolutionary algorithm that simulates human behavior of counseling within a group to solve problems. GCO has been successfully applied to single and multi-objective optimization problems. In this approach, an item is either selected or dropped entirely to fill the knapsack in a way that the total weight of selected items is less than or equal to the knapsack size, and the value of all items is as significant as possible. The results of this approach have shown its efficiency in solving the knapsack problem.

Brief table of previous studies.

Table 2-1 provides a summary of previous knapsack problem studies, including researchers' names, year of publication, methods used and the results.

Table 1: a comparison of knapsack problem studies

researchers	Year	Methods used	results
Shang Gao et al.	2014	Estimation of Distribution Algorithms	This technique is highly reliable and effective in solving the knapsack problem.
Arish Pitchai et al.	2015	Quantum Walk Genetic Algorithm QWGA, Greedy genetic algorithm (GGA)	QWGA is better than GGA.
Ameen Shaheen et al.	2016	genetic algorithm, branch and bound algorithm, greedy algorithm, and dynamic programming algorithm.	The genetic algorithm was the most effective in resolving the problem.
Indresh Kumar Gupta	2018	Genetic algorithm(GA) , gravitational search algorithm(GSA)	By combining these approaches, highly accurate results were achieved
Ravneil Nand et al.	2019	Multi Knapsack Problem (MKP), Firefly Algorithm (FA) + Genetic Algorithm (GA)	The FAGA model worked quite well on multidimensional knapsack problems.
Amol C. Adamuthe, et al.	2020	Harmony search (HS) algorithm	Proposed HS has enhanced speed and performance.

Frumen Olivas et al.	2020	Fuzzy- based selection hyper- heuristic approach	The proposed method has achieved better results than low-level and traditional selection hyper-heuristics.
Sara Salem	2023	quadratic interpolation optimization (QIO)	Proposed study achieved the best possible results.
Yazeed Ghadi et al.	2023	Group Counseling Optimizer (GCO)	The results of this approach have shown its efficiency in solving the knapsack problem.

Methodology:

In this part, we will introduce the knapsack problem, and then we will describe the steps of the PC algorithm used to solve the KP.

Knapsack Problem Definition:

The knapsack problem is a combinatorial problem. W represents the positive capacity of the knapsack. An individual can place a collection of x different items in the knapsack. The weight of item 'i' is a positive integer ' w_i ', while the value of item 'i' is a positive integer p_i [13]. The objective is to:

$$\sum_{i=1}^m p_i x_i$$

$$\text{Subject to: } \sum_{i=1}^m w_i x_i \leq W$$

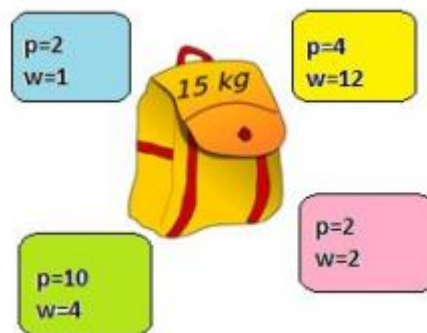


Figure 1: Describes the Knapsack Problem.

Suppose there is a knapsack with a size of 15 items and many items of varying weights and values. Within the constraints of the knapsack's capacity, we desire to maximize the worth of goods included in the knapsack. Then, items were used (1, 2, and,3). The next are their weights and values shown in Table 2:

We need to maximize the total value:

Table 2: Detail of example knapsack problem items.

item	1	2	3
values	20	30	25
weights	9	6	7

Table 3: various Solutions of the Knapsack problem

1	2	3	Total weight	Total value
0	0	0	0	0
0	0	1	7	25
0	1	0	6	30
0	1	1	13	55
1	0	0	9	20
1	0	1	16	45
1	1	0	15	50
1	1	1	22	75

$$\sum_{i=1}^3 20x_1 + 30x_2 + 25x_3 \quad x_i \in (0,1)$$

Subject to:

$$\sum_{i=1}^3 9x_1 + 6x_2 + 7x_3 \leq 15$$

There are $2^3 = 8$ possible subsets of items for this issue, as shown in Table 3. Two solutions exceed the capacity of knapsack, and they are (1, 3), (1, 2, 3). The optimal value for the specific constraint ($W = 15$) is 50, which is reached with 2 and 3.

Probability Collectives Algorithm (PCA).

In PCA, each agent i is connected with a distinct variable x_i and is supposed to have m_i potential strategies (actions or moves) with which it is adjusting its variable. Thus, variable x_i is allocated by agent i as [5]:

$$X_i = \{X_i^{[1]}, X_i^{[2]}, \dots, X_i^{[m_i]}\}, \quad i \in \{1, 2, \dots, N\} \quad (1)$$

Each agent x_i^k $1 \leq k \leq m_i$, is a randomly selected value from $[x_i^L, x_i^H]$ using the probability distribution $q(x_i)$ connected with agent. Each agent collects the strategy M , which is chosen randomly by other agents as:

$$Y_i^{[1]} = \{X_1^{[?]}, X_2^{[?]}, \dots, X_i^{[?]}, \dots, X_{N-1}^{[?]}, X_N^{[?]}\} \quad (2)$$

The superscript [?] represents random selection, and each agent has formed one strategy set for each of the residual strategies. Thus, the set of solutions created by agent i as illustrated below:

$$\begin{aligned} Y_i^{[2]} &= \{X_1^{[?]}, X_2^{[?]}, \dots, X_i^{[?]}, \dots, X_{N-1}^{[?]}, X_N^{[?]}\} \\ Y_i^{[3]} &= \{X_1^{[?]}, X_2^{[?]}, \dots, X_i^{[?]}, \dots, X_{N-1}^{[?]}, X_N^{[?]}\} \\ Y_i^{[r]} &= \{X_1^{[?]}, X_2^{[?]}, \dots, X_i^{[?]}, \dots, X_{N-1}^{[?]}, X_N^{[?]}\} \\ Y_i^{[m_i]} &= \{X_1^{[?]}, X_2^{[?]}, \dots, X_i^{[?]}, \dots, X_{N-1}^{[?]}, X_N^{[?]}\} \end{aligned} \quad (3)$$

After each agent, i estimate the objective function for each combined strategy set $Y_i^{[m_i]}$ as:

$$[G(Y_i^{[1]}), G(Y_i^{[2]}), \dots, G(Y_i^{[r]}), \dots, G(Y_i^{[m_i]})] \quad (4)$$

Per agent locate the sum of the objective function for its collective strategy set to be reduced as follows:

$$\{\sum_{k=1}^{m_i} G(Y_1^{[k]}), \sum_{k=1}^{m_i} G(Y_2^{[k]}), \dots, \sum_{k=1}^{m_D} G(Y_D^{[r]})\} \quad (5)$$

It is very difficult to locate the minimum of function $\sum_{r=1}^{m_i} G(Y_i^{[r]})^n$ because there are multiple possible local minima. For this cause, the objective function is transformed into another topological space by constructing a simple function and putting it in a new form of construction as a Homotopy Function [14].

$$J_i(q(x_i), T) = \sum_{k=1}^{m_i} G(Y_i^{[r]}) - T * E \quad (6)$$

Each agent is associated with a uniform probability distribution $q(x_i)$, where $T \in [0, \infty)$ is a computational parameter that is called temperature. Thus, $(X_i^{[r]})$ is defined as:

$$q(X_i^{[r]}) = \frac{1}{m_i}, \quad k = 1, 2, 3, \dots, m_i \quad (7)$$

Each agent i also calculates the predicted value of its objective function $\sum_{r=1}^{m_i} G(Y_i^{[r]})$, during utilising combined product probability distribution that is created by

$q(X_i^{[r]}) = \frac{1}{m_i}$, $k = 1, \dots, m_i$, and randomly sampled probabilities from distributions of different agents. That is [5]:

$$\left\{ \sum_{k=1}^1 E(G(Y_i^{[r]})), \sum_{k=1}^2 E(G(Y_i^{[r]})), \dots, \dots, \sum_{k=1}^{m_D} E(G(Y_i^{[r]})) \right\} \quad (8)$$

Currently, we require to replace E utilized in the Homotopy function and place its place a Convex function such as the Entropy Function [2].

$$S_i = - \sum_{k=1}^{m_i} \left[q(X_i^{[r]}) \log_2 q(X_i^{[r]}) \right] \quad (9)$$

Hence, the Homotopy function is reduced for each agent i as:

$$\begin{aligned} J_i(q(X_i^{[r]}), T) &= \sum_{r=1}^{m_i} E(G(Y_i^{[r]})) - T * S_i \\ &= \sum_{r=1}^{m_i} E(G(Y_i^{[r]})) - T * \left(- \sum_{r=1}^{m_i} \left[q(X_i^{[r]}) \log_2 q(X_i^{[r]}) \right] \right) \end{aligned} \quad (10)$$

Where $T \in [0, \infty)$

Many techniques are used to update the probability of all the strategies, such as the Nearest Newton Descent Scheme (NNDS), Broden-Flectcher-Goldfarb-Shanno (BFGS) and Deterministic Annealing (DA) [6]. Thus, the NNDS will be used in this paper to update the probability for each agent i as follows:

$$q(X_i^{[k]}) \leftarrow q(X_i^{[k]}) - \alpha_{step} * q(X_i^{[k]}) * K_r \text{ update} \quad (11)$$

$$\text{Where } K_k \text{ update} = \frac{\text{Contribution of agent } i^k}{T} + s_i(q) + \ln(q(X_i^{[k]})) \quad (12)$$

$$\text{And Contribution of agent } i^k = E(G(Y_i^{[k]}))_n - \left(\sum_{r=1}^{m_i} E(G(Y_i^{[k]})) \right)_n \quad (13)$$

Where T is Boltzmann's temperature, which takes a value $\in (0, 1]$, which starts from $T \gg 0$ or $T = T_{initial}$ or $T \rightarrow \infty$. And also, K is the number of iterations and $s_i(q)$ is the Entropy Function of the agent. Each strategy has the maximum contribution to the minimization of the expected utility function. This strategy is comprehended as a suitable combined strategy $X_i^{[fav]}$. The objective function $(G(Y^{fav})^n)$ computed for all agents, where Y_{fav} is given by $Y^{fav} = \{X_1^{fav,n}, X_2^{fav,n}, \dots, X_{N-1}^{fav,n}, X_N^{fav,n}\}$. The PC algorithm updates the boundaries of variables Ω and Boltzmann's temperature as follows:

$$X_i^L(n+1) = (1 - \lambda) * X_i^{fav}, \quad i=1 \dots N \quad (14)$$

$$X_i^H(n+1) = (1 + \lambda) * X_i^{fav}, i = 1, \dots, N \quad (15)$$

$$T_{n+1} = (1 - \alpha_T) * T_n \quad (16)$$

Where $0 < \lambda < 1$ the range is factor and $0 < \alpha_T < 1$ is the cooling rate. The algorithm PC continues until one of mentioned criteria is satisfied as follow

- If temperature $T \rightarrow 0$.
- If $\|G(Y^{fav})_n - G(Y^{fav})_{n-1}\| \leq \varepsilon$ where $\varepsilon > 0$.

The PCA of knapsack problem

In this problem, we applied the PC algorithm as follows:

1. Initial parameters $(T, \lambda, \alpha_s, \alpha_T, K, M_i, Maxit, Runs)$, as well as the parameters of KP problem is as:
 N is the number of items where $N = 10, 50, 100, 150, 200$.
 W is the capacity of knapsack where $W=150$.
2. Initialize the weights randomly among (1:100) such as:
 $w = [10, 20, 50, 15, 60, 100, 3, 2, 18, 80]$ when $N=10$.
3. Initial the strategy q to each agent i .
4. Initial items $p_i^{[m_i]}$ random such as $p_1 = \{2_1^{[1]}, 6_1^{[2]}, \dots, p_1^{[m_i]}\}$.
5. find a set of solution $Y_i^{[m_i]}$ then evaluate fitness function.
6. find expected function E and the homotopy function.
7. update probabilities value for k of iteration.
8. find the maximum probability.
9. evaluate objective function, and update T
10. repeat until the number of iteration $\geq Maxit$, and then show the results.

Results and Discussion:

The suggested algorithm is implemented using MATLAB programming language and tried on a computer with the following specifications: Windows 10, Intel core i5-3210M CPU 3 GHz and 4 GB RAM. We implemented the PC algorithm of the knapsack problem for different items N where these items belong to the set $\{10, 20, 30, 40, \text{ and } 50\}$. Each item has N strategies, starting from uniform probability and random initial values. So, the problem is iterated 150 times over 5 runs, so the capacity of KP (W) is 150. Moreover, we took the best solutions for each run.

Figure (2-a) shows the performance of the probability collectives algorithm for the knapsack problem when the number of items is 10, where we get the optimal solution of about 521 and the worst solution 385 about over 4 run. Because the favorable strategy of some items is close to one, as shown in Figure (2-c). You can also see all the results for five runs in Figure (2-b).

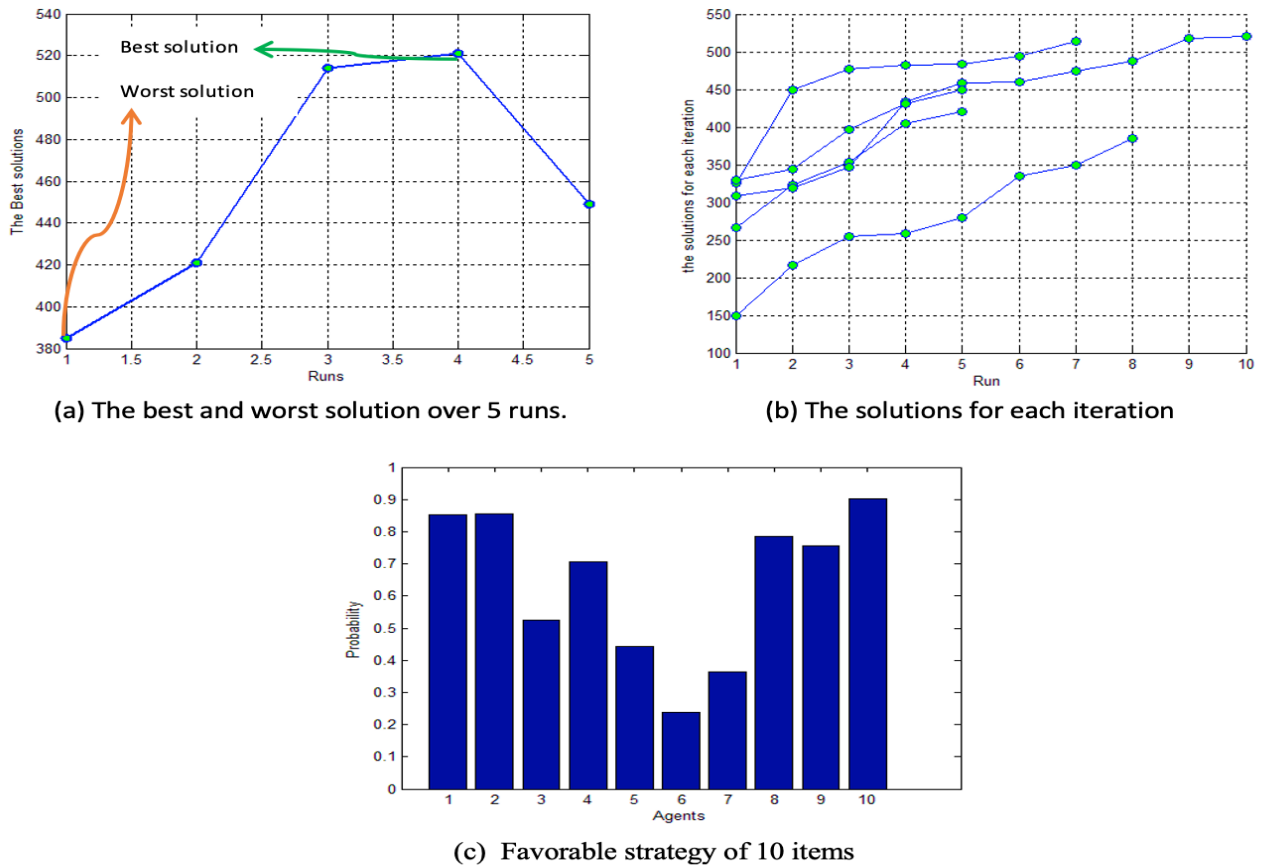


Figure 2: describes the performance of PCA for knapsack problem $N=10$.

To sum up, the results of the knapsack problem with different sizes of 20, 30, 40, and 50 reached the best solutions of 690, 831, 901, and 987 respectively. The worst solutions are 513, 442, 604 and 794 as illustrated in Table 4.

Table 4 demonstrates a summary of outcomes for the set of items belonging to $\{10, 20, 30, 40, \text{ and } 50\}$ and also shows the average of all results and the standard deviation over five runs. We found the mean best solutions and the standard deviation, such as mean=458 and STD 58.9152 at 22 571.830657 when N equals 10, and we also obtained the best and the worst solutions for all sizes of items. From Table 4, it is clear that the majority of results differ depending on a set of items and weights when we use the size small of items that give a convergence rate faster than other sizes, as shown in Table 4.

Number of Items	Best solution	Worst solution	mean	STD DEV	Execution Time
10	521	385	458	58.9152	571.830657 seconds
20	690	513	604.4	62.72	5569.249837 seconds
30	831	442	669.4	147.7	10432.885089 seconds
40	901	604	806.6	118.8709	17250.634935 seconds
50	987	794	898.6	73.86	22054.12301 seconds

Table 4: The results of knapsack problem $N= \{10, 20, 30, 40, 50\}$

Conclusion and Future Work

In this paper, we implemented a new metaheuristic algorithm for solving knapsack problems with various items. In addition, the capacity of the knapsack is a fixed value over five runs. The outcomes show that the PC algorithm was effective and powerful enough to solve this problem.

In the future task, we will implement the PC algorithm to solve the multi-knapsack problem with different sizes and capacities, and we will also compare the PC algorithm with various techniques, such as genetic algorithm, simulated annealing, and particle swarm intelligence to gain a better performance to solve this problem regarding the reduction of time-consuming.

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ترجمة الأزمنة واتجاهاتها من الإنجليزية إلى العربية

أ.محمد عياد حمزة

محاضر مساعد في جامعة المرقب- كلية الآداب والعلوم مسلاتة / قسم اللغة الإنجليزية

الملخص:

تركز هذه الورقة على ترجمة الأزمنة من الإنجليزية إلى العربية حيث تهدف إلى اختبار قدرة طلاب الترجمة في قسم اللغة الإنجليزية على ترجمة الأزمنة الإنجليزية إلى العربية لاكتشاف الصعوبات التي تواجههم. فهي دراسة حالة حيث تتبع طريقة الملاحظة فتقدم اثني عشر جملة إنجليزية، كل منها يعبر عن زمن محدد ويطلب من طلاب الترجمة ترجمتها إلى العربية. مجتمع البحث هنا هو طلاب الترجمة في السنة الثالثة والرابعة بكلية الآداب والعلوم مسلاتة، وهن جميعهن طالبات. يتم مقارنة ترجمة الطالبات قياساً على نموذج د. عزالدين محمد نجيب في ترجمة الأزمنة. أهم نتائج هذه الدراسة أن طالبات الترجمة في السنتين الثالثة والرابعة قد واجهنا صعوبات في ترجمة الأزمنة المستمرة والتامة المستمرة من اللغة الإنجليزية إلى اللغة العربية.

ABSTRACT:

This paper focuses on translating English tense and aspect into Arabic. The objective of this study is to investigate the ability of translation students to translate tense and aspect from English into Arabic to identify the difficulties they face in this regard.

It is a case study that follows an observation method by asking students of the translation branch to translate twelve sentences, each representing an aspect, into Arabic.

The population of the study includes the students of the translation branch at the Faculty of Arts and Sciences in Messalata. Students in their third and fourth years are selected as the sample for the study, and the entire sample consists of female students.

Translations are evaluated according to Najeeb's model of translating English tense and aspect into Arabic.

The most important result indicates that students of the translation branch (third and fourth year) encounter difficulties in translating the continuous and perfect progressive aspects of English into Arabic.

Keywords: Tense, Aspect, effective communication, intended meaning, translator.

Introduction

The tense and aspect of the English language, as a topic in English grammar, are frequently studied in schools and faculties. Most students, particularly those specializing, can use the correct tense and aspect in their speech or writing.

The significance of tense and aspect in language is evident when an event takes place (the intended time of an action) from the perspective of the writer or speaker for effective communication.

Since translation is concerned with conveying the intended meaning from one language to another to achieve effective communication, the translator bears the responsibility of reproducing the intended meaning in a proper and correct way. Any diversion of meaning leads to a distortion of communication with the receiver of the translated production.

Therefore, the role of the translator is to convey the intended meaning in an accurate rendering in order to be understood as it is intended. Moreover, the task of translation

requires competence from the side of translator which enables him/her expressing accurate structures that represent the same of the intended meaning.

Regarding Tense and Aspect, Arabic expresses them in a different way from English. Whereas English depends on verbs and their forms, Arabic uses different tools in question. In that, some tenses include four verbs such as The Passive Future Perfect :(It will have been studied), in contrast with Arabic which uses two forms of a verb (present or past) which has some other devices such as (سوف) or (قد) to expresses the same tense as follows: (سوف تكون قد درست) (Ghazala, 1995).

2-The Problem of the study

Libyan students, as native Arabic speakers, have not studied any topics related to tense and aspect of Arabic. The topic has not been offered to them either in schools or at the undergraduate stage; this is because it is neglected at all stages of education.

This study aims to investigate the competency of students in the branch of translation in translating English Tense and Aspect into Arabic. Therefore, it will depend on their knowledge of Arabic and how well they understand the meaning expressed by English tense and aspect.

The study is going to test the students of the third and fourth years of the branch of translation in the Arts and Sciences Faculty in Messallata. The test consists of twelve sentences, each representing an aspect of the English tense. Students will be asked to translate them into Arabic, and then the translations will be evaluated according to Najeeb, M. E, suggestion for translating tense and aspect.

Finally, the study will conclude the results of the students, comparing them to Najeeb's suggestion.

3.Aims and objectives:

This paper aims to investigate students' translation of English tense and aspect into Arabic to evaluate their competency and understanding of the topic in question. Students of the branch of translation (third year and fourth year) will be asked to translate twelve sentences, each of which represents one aspect in English. These sentences should be translated into Arabic by them.

4.Hypothesis:

Since the sample (students) has not acquired any knowledge about tense and aspect in Arabic, their translation will be based solely on their understanding and abilities to express thoughts in Arabic. Therefore, their translation might be unacceptable or incoherent regarding some aspects.

5. Research Question:

1. To what extent can the (sample) reproduce tense and aspect in Arabic?
2. Do their translations express the exact tense?
3. What difficulties do they face in the question?

6. Significance of the study:

The study sheds light on the translation of tenses and aspects from English into Arabic. This topic has not been offered to Arab students except in some practical activities in translation. Therefore, it will provide teachers, students, and translators with remarkable points in question. It can be a good reference for translating English tenses into Arabic as well.

7. Scope of the study:

This study is limited to testing the students of the translation branch, third and fourth year, in the faculty of Arts and Sciences in Messalata. The test is concerned with translating English tense and aspect into Arabic.

8. Definition of Terms:

Translation: rendering of meaning.

Translator: person who renders meaning.

Tense: time of action.

Aspect: type of tense.

Effective communication: understanding the message.

Intended meaning: the message.

Literature review

Several papers have been presented by Arab scholars dealing with Tense and Aspect in Arabic compared with Tense and Aspect in English. In spite of some differences among these papers, scholars have exerted considerable efforts to make sense along those comparisons. They have attempted to clarify how Arabic expresses Tense and Aspect differently from English. Whereas English uses forms of verbs to express aspects, Arabic uses other devices of language, but not forms of verbs. It sometimes uses adjectives instead of verbs as well.

For example, in the continuous tenses, e.g., "He was sitting" (كان جالساً), the word "(لقد)" before the past verb may express the perfect aspect, e.g., "He has left" (لقد غادر),

or "He will have arrived" (سيكون قد وصل). As for perfect continuous, Arabic uses "(ما (ماكانا لننقطع عن مشاهدة "We had been watching TV" - "(ما كان ينفك)" or "(كان لينقطع عن التلفاز/ما برحنا مشاهدة) (فريد الدين ايدن، الأزمنة في اللغة العربية، استنبول 1997)

The study sheds light on the translation of tenses and aspects from English into Arabic. This topic has not been offered to Arab students except in some practical activities in translation. Therefore, it will provide teachers, students, and translators with remarkable points in question. It can be a good reference for translating English tenses into Arabic as well.

Arab linguistics and scholars have not paid any attention to Tense and Aspect in Arabic; they just focus on metaphors, the function of words emphasizing their forms. (أيدن، 1997). Gadallah (1999) discussed the topic in his book "Translating Tenses in Arabic-English and E.A. Context. (Johne Benjamine, vol. 52, No. 3, 2006) referred to the usage of "(لقد و قد)" to express perfect tenses.

Nidal Ajaj discussed "The differences between the two languages," which were explained in Arabic in his essay titled (Tense and Aspect in English, at <http://learningenglish100.com>).

Najeeb (2005) suggests how to translate English tenses into Arabic.

This is how he translated tenses:

8.1-Present Tenses

- Metals expand on heating تتمدد المعادن بالحرارة
- She is crying هي تبكي, Ahmed is sleeping أحمد نائم
- He has just eaten his breakfast تناول افطاره توا
- She has been eating since noon

ظلت تأكل من الظهر أو ما زالت تأكل من الظهر

8.2-Past Tenses

- He went home late yesterday. عاد أمس إلى البيت متأخرا
- He was lucky كان محظوظا
- He was studying all morning كان يذاكر طيلة الصباح
- While he was bathing, the bell rang. بينما كان يستحم، دق الجرس
- I ate the food that I had bought. اكلت الطعام الذي كنت قد اشتريته

f. He had been studying for 12 hours before the electric current cut off. ذاكر لمدة اثني عشره ساعة قبل أن ينقطع التيار الكهربائي

8.3-Future Tenses

- a. I'll bring it tomorrow. سأحضرها غدا أو سوف أحضرها غدا
- b. I'll be sleeping at six. أنا سأكون نائما عند الساعة السادسة
- c. She will have gone before you come. ستكون قد رحلت قبل أن تأتي
- d. I'll be tired because I'll have been driving all night. سوف أكون متعبا لأنني سأكون قد قددت السيارة طوال الليل

Najeeb's model of translating tense and aspect from English into Arabic is adopted as the framework of this study.

Population and Sampling:

The population of this research comprises the students of the Branch of Translation in the Department of English at the Arts and Sciences Faculty in Messallata, one of Almergeb University's faculties. The population includes second, third, and fourth-year students to form the sample of the research. They have been chosen to study translation rather than literature.

This study has selected students from the third and fourth years as the sample. They were chosen because they have been studying translation for a period of two and three years, thus, they should have the ability to render meaning either from English into Arabic or vice versa.

The sample consists of fourteen students: six in the third year and eight in the fourth year.

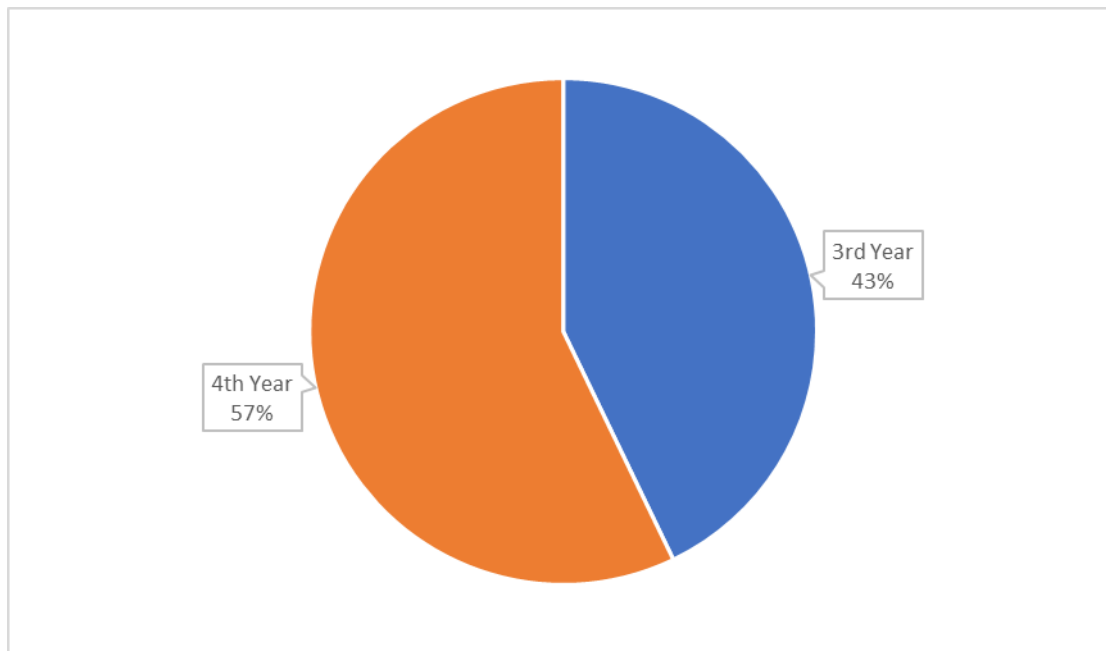


Figure 1 Students' Academic Year

All the students are female, comprising the entire community of the third and fourth years.

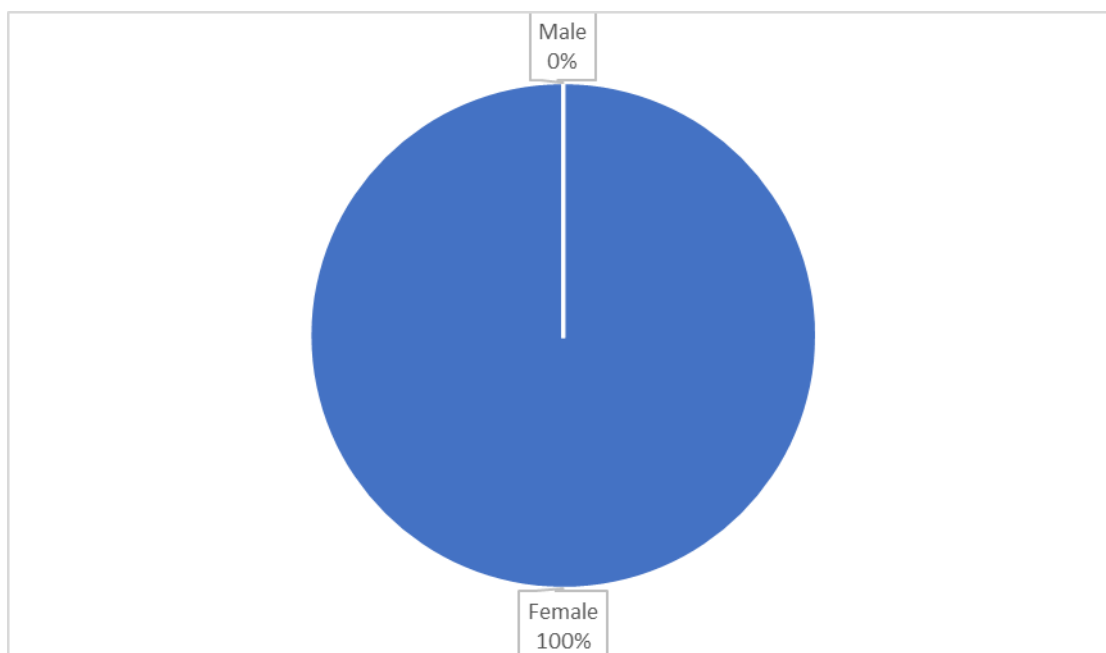


Figure 2 Sample Gender

Method of research:

It is a case study that concerns itself with translating tense and aspect from English into Arabic. It is descriptive, testing the students (sample) by asking them to translate twelve simpler structured sentences. These sentences represent tenses and aspects in English, with each one representing one aspect.

The students' translations will be evaluated according to Najeeb's model of translating tense and aspect. The focus will be on the structure of verbs and any other means used in expressing tense and aspect.

The evaluation of translations will be as follows:

- A. Correct translation: A percentage of correct ones according to Najeeb's model.
- B. Closer translation: A percentage of the ones close to the correct ones.
- C. Over-translated ones: This will include any translation with additional terms. A percentage of them to the total number.
- D. The wrong or false in the percentage of the study.

With these categories in mind, the results of the evaluation will clearly show points of weakness in the sample's ability to express tense and aspect in Arabic. This weakness will be attributed to the lack of studying the topic in Arabic. The following are the twelve sentences that will be given to the sample to translate into Arabic:

1-It rains in winter.

.....

2-It is raining now.

.....

3-It has rained a lot.

.....

4-It has been raining for a week.

.....

5-It rained last night.

.....

6-It was raining when we arrived here this morning.

.....

7-It had rained before we got up this morning.

.....

8-It had been raining until we started playing football yesterday.

.....

9-It will rain tomorrow.

.....

10-It will be raining tomorrow morning.

.....

11-It will have rained tomorrow afternoon.

.....

12-It will have been raining for hours then.

.....

The evaluation will cover the terms used in expressing tense. All English sentences used in this test depend on the event (RAIN) in twelve aspects of English tenses. Therefore, all the products will include the event (تمطر) or (أمطرت), i.e., the present or past form of the Arabic verb. It sometimes combines with other terms such as (كان) and (لقد or قد). Moreover, there will be other terms that might be used by the sample of students.

Data Analysis

The participants translated the statements in question, which represent twelve tenses. The population of the study includes all the students in the third year of the translation branch. Their total number is fourteen. The analysis of the translation is as follows.

A-Simple Tenses:

All the translations are correct, despite some over-translated instances, such as when they contain the Arabic term "لقد" which expresses emphasis on meaning, whereas the original text does not include emphasis. For example, the translation of the past simple (the fifth one, "It rained last night") was translated by three students as "لقد أمطرت (البارحة)".

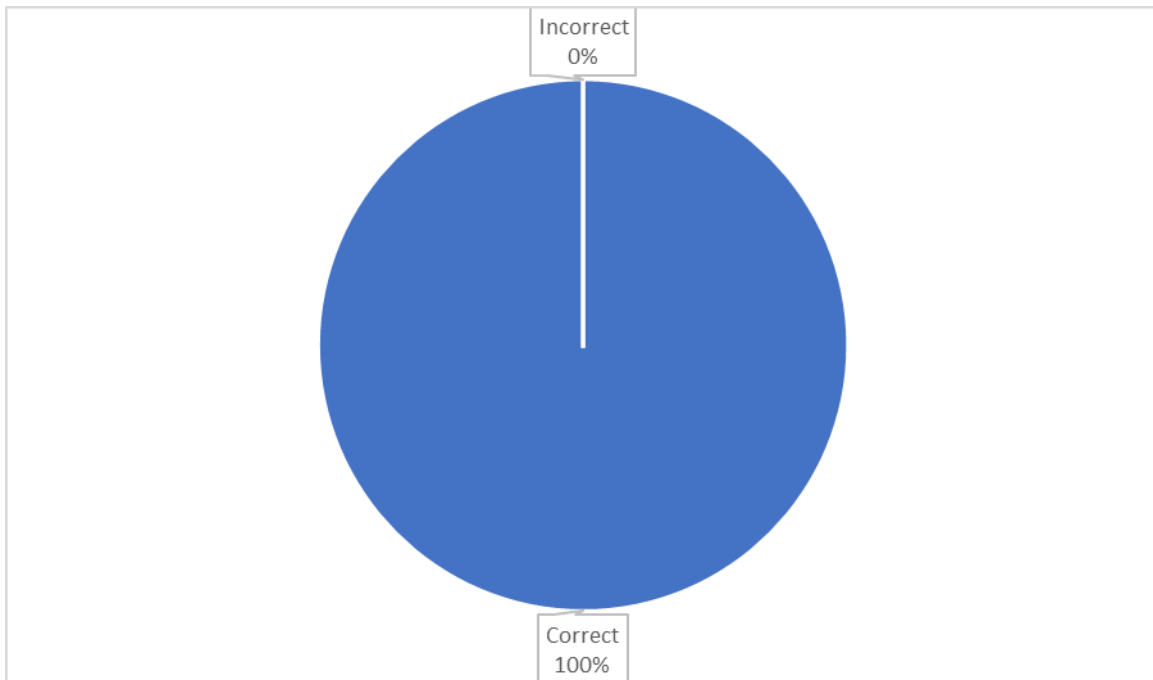


Figure 3 Simple Tenses Translation

B-Continuous(progressive) tenses are translated as follows: -

- A) The Present is almost correct; the students used the term "now" (الآن) to express the continuity of action.

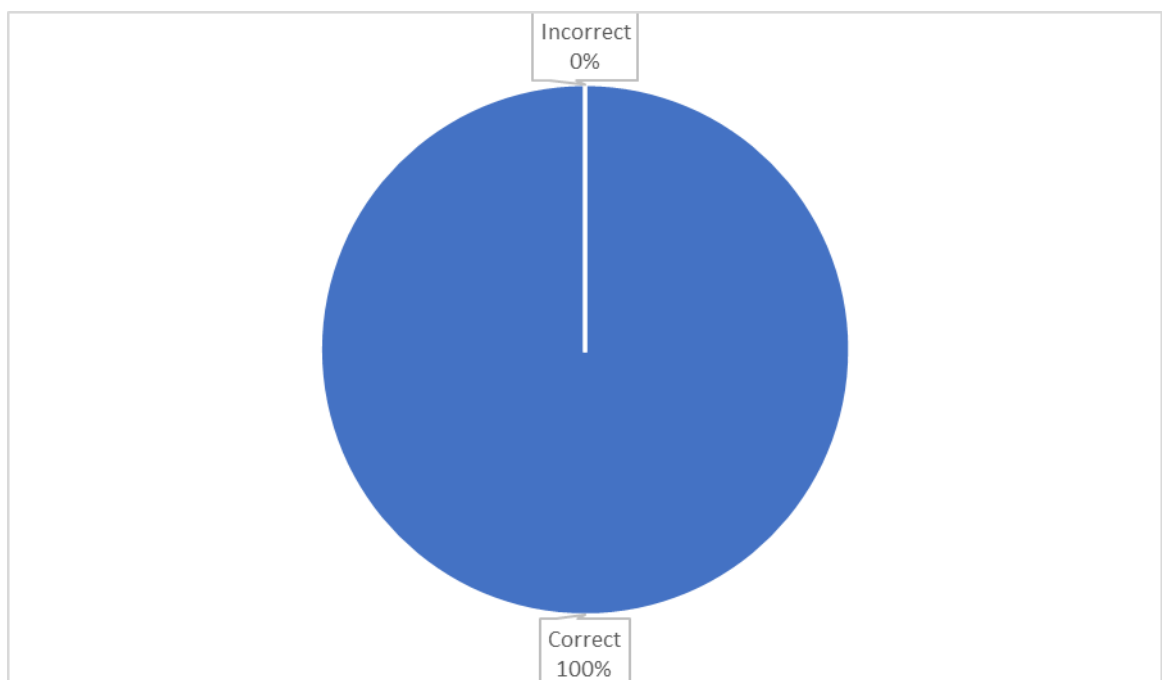


Figure 4 Progressive Tenses Translation

(It is raining now) as (إنها تمطر الآن).

B) Past is almost correct, regardless of the over-translation by three participants using the Arabic term "لقد," which has nothing to do with continuous action (It was raining) as (لقد كانت تمطر), while the expression (كانت تمطر) is enough to convey the meaning of past continuous.

C) In the assessment of future tense translations, a mere three out of fourteen students demonstrated proficiency in articulating the prolonged nature (progress) of the raining action. Their translations exemplify this capability, as follows:

a. سيكون الجو ماطرا

b. ستظل تمطر

c. سوف يكون ماطرا

Conversely, the remaining participants failed to convey the sense of progression, presenting mere iterations of future simple constructions:

a. سوف تمطر

b. ستمطر

c. سوف يسقط المطر

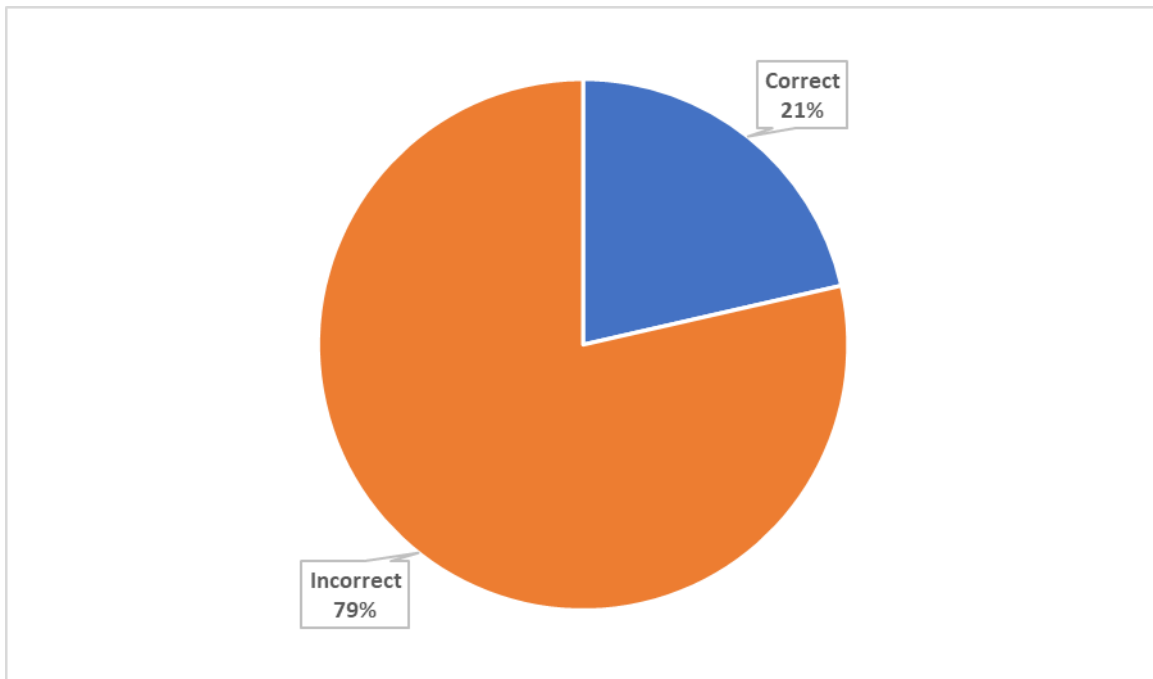


Figure 5 Future Tense Translation

This deficiency indicates the participants' incapacity to express the progressive nature of the action in future tense constructions.

C-Perfect Tenses:

1-Present perfect: - {It has rained a lot}

Three out of fourteen students could not express the sense of perfect in Arabic ,their translations were close to past simple as follows:-

a-أمطرت

b-انها أمطرت

c-أمطرت

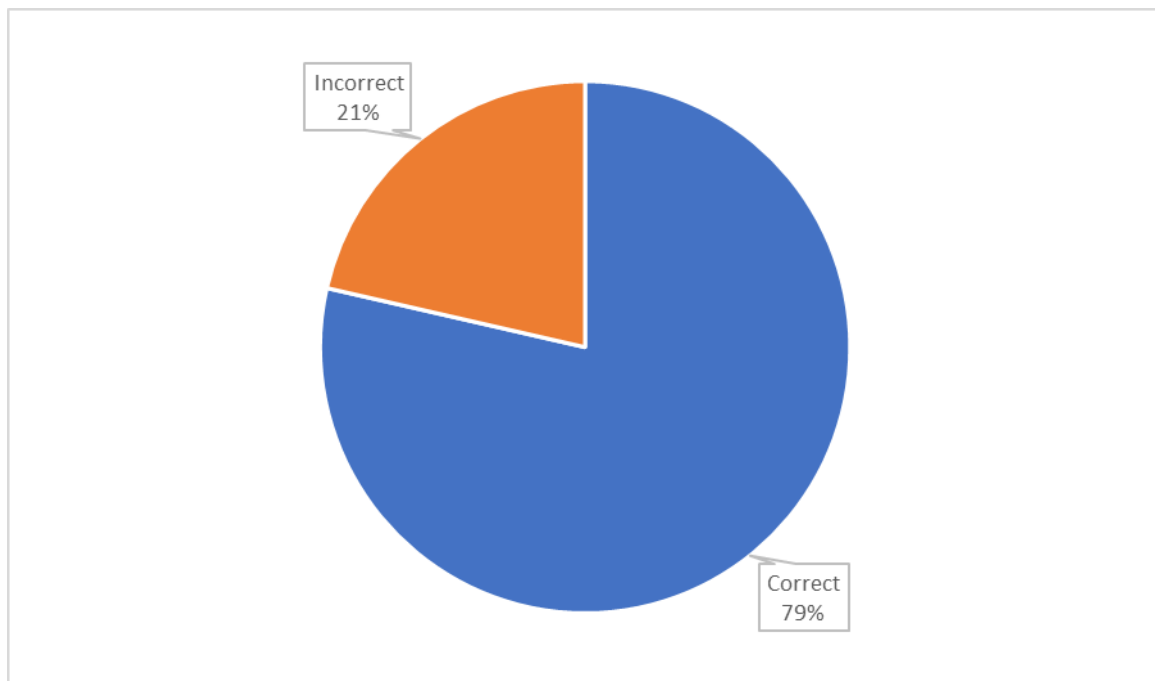


Figure 6 Present Perfect Translation

Whereas others have used the Arabic terms قد or لقد to express the sense of perfect tense such as أمطرت لقد and أمطرت قد

2-Past perfect: - {It had rained before.....}

All Participants have translated it as if it was past simple, although some of them have used the Arabic term (لقد) whereas they should use (كانت) instead (كانت قد أمطرت)

3-Future perfect- It will have rained.....

Just one student has translated it correctly as (سنتكون قد أمطرت), whereas the rest of them have translated it as (سوف ستمطر) as if it is future simple. Therefore, one answer

is correct which represents 7.14%, whereas thirteen answers are wrong which represents 92.86% of the sample.

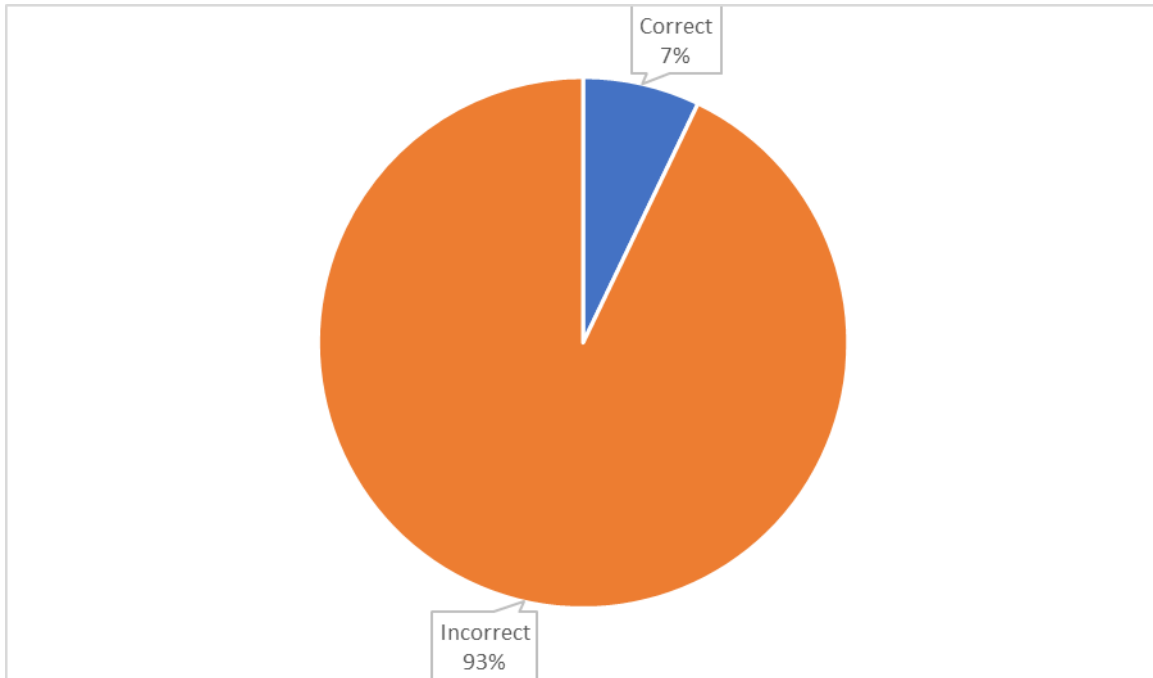


Figure 7 Future Perfect Translation

D-Perfect continuous:

a-The present ((It has been raining)).

Seven responses, constituting 50% of the sample, are deemed accurate. Conversely, the remaining seven responses are categorized as incorrect, as they either deviate significantly from the correct aspect or are outright wrong. This also constitutes 50% of the sample.

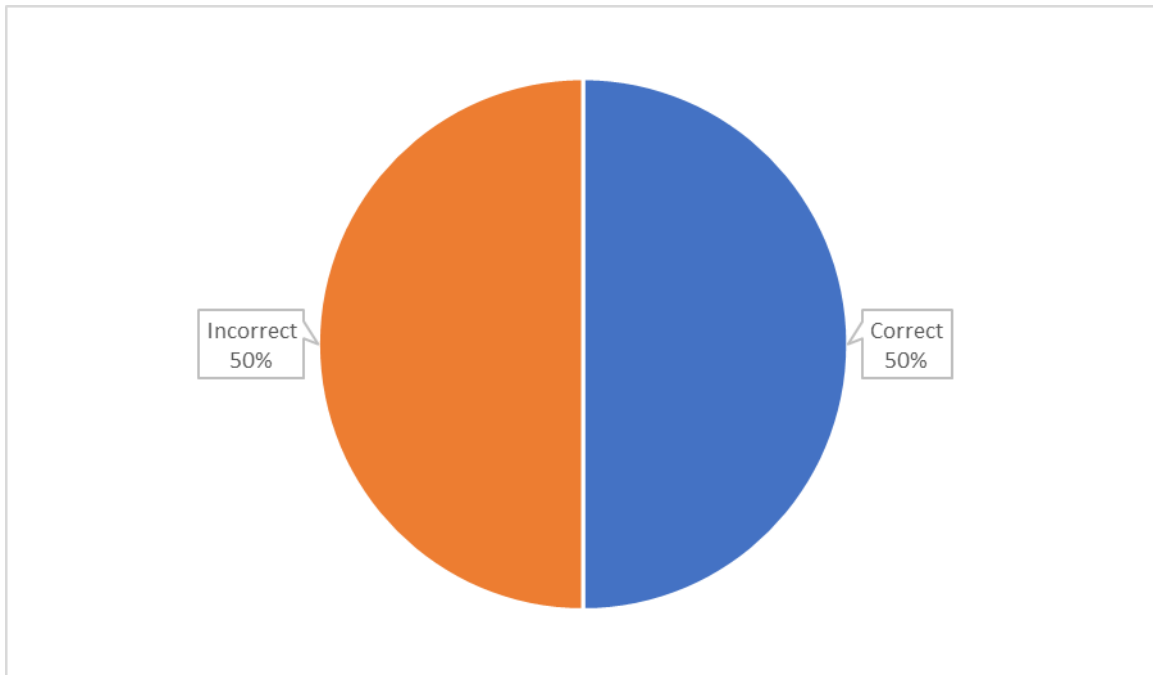


Figure 8 Present Perfect Continuous Translation

b-Past; (It had been raining.....)

Four responses are accurate, utilizing terms indicative of past progression, such as (بقيت، طلّت، استمرت), comprising 28.57% of the sample. Conversely, the remaining responses are deemed incorrect, as they fail to convey the sense of past perfect continuous. Instead, they predominantly align with past simple or continuous tenses, with some instances of expressing present or present continuous. This inaccuracy is evident in 71.43% of the sample.

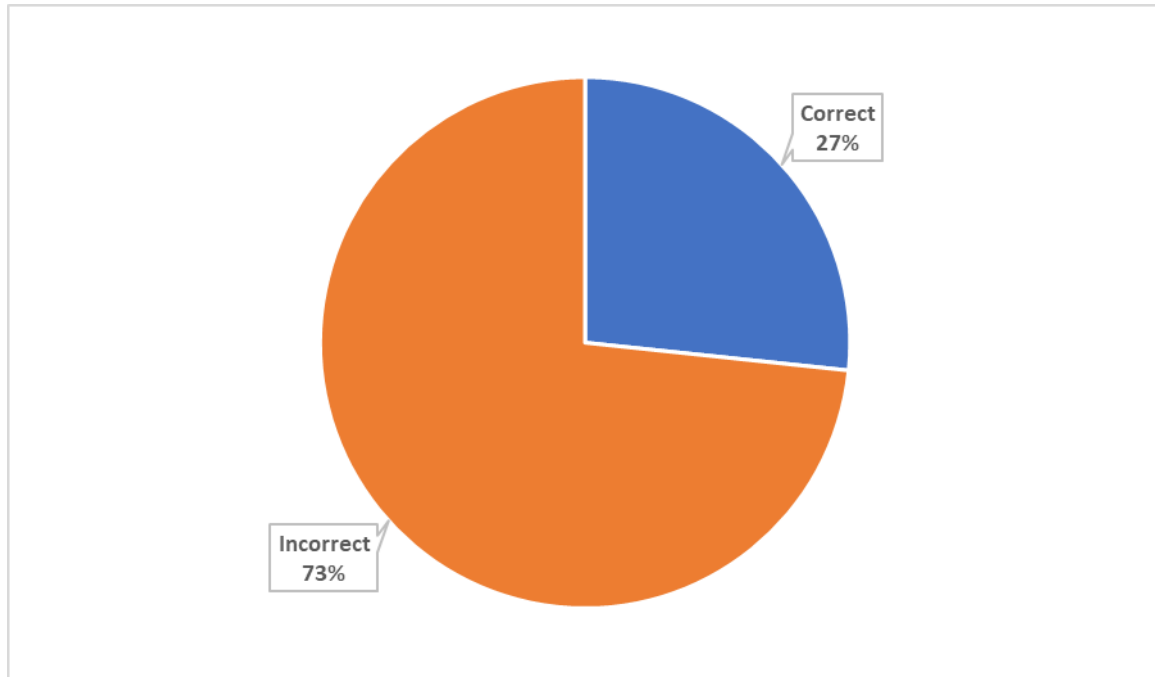


Figure 9 Past Perfect Continuous Translation

C-Future: ((It will have been raining.....))

No response exhibits complete accuracy; the majority merely conveys either future simple or future continuous tenses. Consequently, all responses are classified as incorrect, encompassing 100% of the sample. This indicates that none of the participants provided a correct answer, yielding a 0% accuracy rate within the sample.

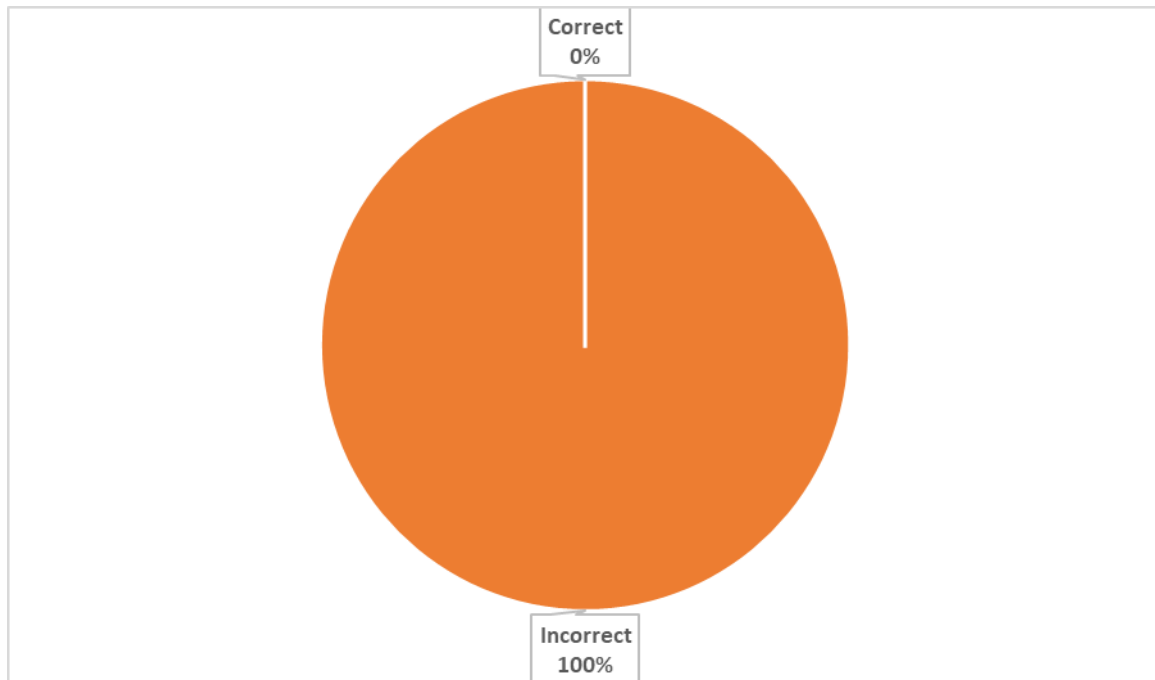


Figure 10 Future Perfect Continuous Translation

Discussion:

Deficiency in articulating tense and aspect in Arabic. This inadequacy can be traced back to their limited exposure to the study of the Arabic language. It is incumbent upon translation educators to allocate more emphasis and concentration on this subject.

Translation students at the Faculty of Sciences and Arts encounter challenges when translating tense and aspect from English into Arabic, with specific hurdles emerging in the realms of perfect and perfect continuous aspects. Hence, instructors should prioritize addressing these aspects in their teaching methodologies.

Results:

No challenges were encountered in translating simple aspects, notwithstanding instances of over translation. Concerning continuous tenses, some participants struggled to convey them accurately, especially in future contexts. It became apparent that students encountered difficulties when translating perfect tenses, particularly in cases involving perfect continuous expressions. This was particularly evident in the translation of Future Perfect Continuous, where none of the students could produce a suitable expression that captured the intended meaning. This observed weakness can be attributed to the neglect of studying tense and aspect in Arabic.

Conclusion:

This study aimed to examine the proficiency of third and fourth-year students in the translation branch in rendering English tense and aspect into Arabic. The research sample comprised all third and fourth-year students who were tasked with translating twelve sentences representing various aspects of English tenses into Arabic. The research employed an observational method through a written test, requiring the

participants to translate the provided sentences into Arabic. The study findings revealed the following outcomes:

- a. Students demonstrated proficiency in translating simple tenses.
- b. Difficulties arose when students attempted to translate future continuous tenses.
- c. The translation of perfect tenses led to confusion among students, resulting in a high incidence of errors.
- d. Perfect continuous tenses posed the greatest challenge, with none of the participants providing a correct translation for the past aspect.

Recommendations:

Translation instructors should intensify their focus on aiding students in translating tense and aspect, both through assignments and dedicated workshops utilizing diverse educational materials. Additional resources on this subject should be explored collaboratively by teachers and students to draw insights from other research studies

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التحديات التي يواجهها طلاب اللغة الإنجليزية بجامعة المرقب أثناء التحدث

اسم الباحث: محمد فرج سعيد الدليم

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ملخص:

هدفت هذه الدراسة إلى استكشاف تحديات النطق التي يواجهها طلاب جامعات اللغة الإنجليزية كلغة أجنبية في ليبيا. ولتحقيق ذلك، تم استخدام طريقة نوعية لجمع البيانات. وعلى وجه الخصوص، تمت مقابلة 30 طالبًا (السنة الرابعة) من قسم اللغة الإنجليزية بجامعة المرقب

وبعد إجراء التحليل اللغوي للبيانات، تبين أن الطلاب يواجهون صعوبات مختلفة أثناء التحدث باللغة الإنجليزية. وأشارت النتائج إلى أن غالبية المشاركين واجهوا تحديات في هذا الصدد. تشمل هذه التحديات محدودية المفردات والأخطاء النحوية والنطق غير الصحيح ونقصطلاقة. وتشير الدراسة إلى أنه من الضروري تدريب المعلمين لضمان نجاح عملية التعلم. علاوة على ذلك، ينبغي تصميم مناهج اللغة الإنجليزية لتلبية احتياجات ومتطلبات التعلم للطلاب، مع التركيز بشكل كبير على دورات الاستماع والتحدث. وينبغي تنفيذ استراتيجيات التدريس والتعلم الفعالة لتعزيز الكفاءة اللغوية لدى الطلاب ونبغي التركيز على الأنشطة اللامنهجية مثل نوادي اللغة الإنجليزية. وتساعد هذه الأنشطة في التغلب على الحواجز النفسية مثل الخجل والتردد، مما يحفز الطلاب على تعلم اللغة واستخدامه

الكلمات المفتاحية: إتقان التحدث، متعلمي اللغة الإنجليزية كلغة أجنبية، بيئة اللغة المسهدة، الطلاقة، الدقة

Abstract

This study aimed to explore the speech challenges faced by Libyan EFL college students. To achieve this, a qualitative method of data collection was utilized. In particular, 30 (fourth-year) students from the English Language Department at the University of ELMergib were interviewed.

After conducting a linguistic analysis of the data, it was found that students faced various difficulties while speaking English. The results indicated that the majority of the participants experienced challenges in this regard. These challenges include limited vocabulary, grammatical errors, incorrect pronunciation, and lack of fluency. The study suggests that it is crucial to train teachers to ensure a successful learning process. Furthermore, the English language curriculum should be tailored to meet the learning needs and requirements of students, with ample focus on listening and speaking courses. Effective teaching and learning strategies should be implemented to enhance students' language proficiency and extracurricular activities like English clubs should be given emphasis. These activities help to overcome psychological barriers like shyness and hesitation, motivating students to learn and use the language.

Keywords: proficiency in speaking, EFL learners, target language environment, fluency, accuracy

Introduction

Speaking involves the exchange of messages through verbal communication. However, non-verbal symbols like gestures are also considered part of communication. It is one of the four language skills that EFL students need to develop to effectively communicate in different language use contexts. Lazarson (2001) suggests that certain experts believe that the capacity to speak is tantamount to possessing knowledge of a language, as speech serves as the primary mode of human interaction. However, according to some experts in applied linguistics, speaking has proven to be a challenging skill for EFL learners. Lazarson (2001) argued that spoken English is difficult because it almost always involves interacting with at least one other person. Many linguists, such as Brown (2001), believe that colloquial language, reduced forms, performance, variables, redundancy clusters, rate of delivery, stress, rhythm, and intonation are among the characteristics of speaking that contribute to the difficulty of this skill. Speaking needs to be developed as it helps speakers express their thoughts and ideas, and is also used to judge speakers during first impressions.

This study reveals that Libyan undergraduates studying English as a foreign language face multiple challenges when speaking the language. The study aims to address these difficulties by exploring the following research questions:

- 1 - What are the challenges faced by Libyan undergraduate students when it comes to speaking English?
- 2 - What are the challenges that Libyan EFL undergraduates encounter when speaking English?

Aspects of Speaking

Fluency and accuracy are the primary criteria for assessing foreign language proficiency. As a result, students and other language users must focus on developing these two aspects, along with grammar, vocabulary, and pronunciation, to ensure the development of communicative competence. Fluency is the skill of knowing how to put words, sentences, and ideas together in a suitable way. Some define it as the ability to connect units of speech smoothly and without hesitation.

Per Huges (2002), fluency is attained when learners can express themselves clearly and coherently without hesitation, ensuring their listeners remain engaged. Most EFL learners mistakenly believe that speaking fluently necessitates speaking rapidly without pauses. Thornbury (2005) acknowledged the significance of speech in fluency and the necessity of pauses for breath during speaking. When teaching speaking, teachers strive for the common goal of achieving oral fluency. Teachers focus more on accuracy in language teaching because learners prioritize fluency over accuracy. Without accuracy, speakers will produce incorrect utterances and, as a result, they will not be properly understood by their audience.

There are three types of accuracy: grammatical, vocabulary, and pronunciation. Grammatical accuracy refers to the ability to use appropriate grammatical structures in different situations, including controlling the length and complexity of utterances. According to Huges (2002) and Thornbury (2005), accuracy in vocabulary can be attained by selecting the appropriate and necessary words during speech. However, students may encounter challenges in conveying messages and may misuse words and synonyms that are not universally applicable. Harmer (2004) argued that understanding word class enables speakers to produce grammatically correct utterances, allowing students to use words and expressions

accurately. Pronunciation accuracy refers to saying words in a manner that is widely accepted or understood, the pronunciation is incorrect, the message will not be conveyed appropriately and accuracy is not achieved. Learners should be aware of different sounds, word stress, and intonations to pronounce words accurately and develop their speaking skills. Redmond and Vrchota (2007) emphasized the importance of using the correct word, in the correct instance, and with the correct pronunciation. They highlighted that communicative competence cannot be achieved without these aspects, and therefore, learners and teachers should emphasize them to achieve successful language learning, especially in speaking skills.

Significance of Speaking Competency

Students who are proficient in speaking are often perceived as proficient in all other language abilities. Speaking helps speakers effectively communicate their thoughts and ideas. Ur (2000) argued that out of the four language skills, speaking appears to be the most crucial. Those who are proficient in a language are commonly called 'speakers' of that language, suggesting that speaking encompasses all other forms of language proficiency. Teachers expect students to use language correctly and confidently to attract and convey messages. Baker and Westrup (2003) emphasized the importance of speaking, stating that students who speak English well have a better chance of further education, employment, and promotion.

It highlights the significance of speaking not only within the confines of a classroom but also in real-world situations where corporations and institutions seek individuals proficient in a foreign language with strong oral communication skills. McKay (2006) argues that successful speaking requires specific linguistic competencies like vocabulary, pronunciation, and grammar, as well as sociolinguistic competencies such as understanding the context and register of expressions. Speaking allows learners to confidently express themselves and develop skills to manage challenging situations. Fielding and Ruddock (2002) also stated that speaking opportunities contribute to a stronger sense of belonging, respect, self-worth, and learning management. Celce-Murcia (2001) emphasized the importance of authenticity in student speaking. The topics should be highly interesting to learners, focusing on meanings, values, collaboration, and social development, and providing a rich context.

In conclusion, regular practice in speaking makes individuals effective communicators and allows them to enjoy sharing ideas. Additionally, speaking helps speakers gain the attention of the audience and achieve career success. Furthermore, it enriches one's personal life by providing opportunities for travel, advancement, scholarships, attending conferences and international meetings, representing organizations at global events, and many other benefits. All these facts justify the need to develop students' speaking skills and to adopt effective teaching and learning strategies to ensure that.

Literature Review

This part examines the literature on the speaking challenges faced by EFL undergraduates. Given their relevance to the current study, the following previous studies are discussed. A study was conducted by E. Mohamed and N. Elhadi (2015) regarding the issues surrounding the teaching and learning of spoken English. The study's objective was to explore the challenges and obstacles encountered in teaching and learning English, as well as approaches to address them. A teacher questionnaire was used to collect data from 30 teachers at The African Council Basic and Secondary Schools in Khartoum North. After analyzing the data using the SPSS program, the study revealed significant issues that impede Sudanese students from speaking English. Among these are the low income of most learners, lack of exposure to the target language environment, under qualified teachers, inappropriate teaching materials,

improper teaching methods, and psychological factors such as lack of motivation. To address these issues, the study recommended the development of materials for teachers and learners through steps taken by the educational authorities. The above study demonstrated that speaking English is a significant challenge for many EFL Sudanese learners. This difficulty is attributed to various factors. To address this issue, educational authorities should take practical steps such as teacher training, syllabus development, employing appropriate teaching methods, and creating conducive educational environment. In the Saudi context where English is considered a foreign language, Alzahrani, G. (2018) conducted a study on the reasons for the weakness in English speaking among English Department students at Najran University. The study aimed to investigate the causes of these weaknesses and the influence of gender on the perception of the study sample. Two research questions were formulated and discussed to achieve this. The study involved 59 students (30 males and 29 females) enrolled in the English Departments of Science and Arts at Najran University during the academic year 2017–2018. It was a quantitative study, and data was gathered using a questionnaire. The study uncovered that the deficiencies in the teaching and learning environment, as well as, the shortcomings of the students themselves, were the primary themes identified in the sample. The study also found that gender differences did not significantly impact the opinions regarding the reasons for the difficulty of speaking English among English Department students at Najran University. The above study demonstrated the international nature of the issue being investigated - not only Libyan EFL students struggle with speaking, but especially EFL students. The study revealed that students' decline in English speaking skills is primarily attributed to student weaknesses and the educational environment. It is assumed that various factors, including teacher training and syllabus development, are crucial for enhancing students' oral communication skills.

Afshar, H. and Asakereh, A. (2016) conducted a study in Iran titled "Speaking Skills Problems Encountered by Iranian EFL Freshmen and seniors from Their Own and Their English Instructors' Perspectives." The study involved 238 Iranian EFL students (138 freshmen and 100 seniors) and 30 English instructors from different universities. They participated by filling out a validated questionnaire on speaking skills problems. To triangulate the data, a group of 30 EFL students, consisting of 15 freshmen and 15 seniors, along with 10 English instructors were chosen from the study participants. They were then asked to participate in semi-structured interviews. The study results demonstrated that certain social and instructor-related issues, as well as the lack of teaching facilities and the country's education system curriculum, were significant factors contributing to the speaking skills challenges faced by freshmen and seniors. Additionally, the t-test results indicated that there is no significant difference between the freshmen and seniors' perceptions of their speaking issues. The Chi-square analyses of the questionnaire items also revealed no significant difference between the two groups, except for item 1 (I am afraid of making mistakes). Additionally, the one-way ANOVA results indicated that there was no significant difference in the perception of speaking skills problems among freshmen, seniors, and instructors. The study above confirmed that Iranian EFL students struggle to improve their speaking skills, showing that it's not just EFL learners with Arabic language backgrounds who have difficulty mastering oral communication, but also those from non-Arabic backgrounds. In addition to the social and instructor-related factors mentioned, environment and syllabus-related factors also impact students' proficiency in spoken English.

Al-Jamal, D., and Al-Jamal, G. (2014) conducted a study titled "Investigating Difficulties Faced by EFL Undergraduates in Speaking Skills" in Jordan. The study aimed to describe the challenges that may arise in an EFL environment. The sample was randomly drawn from six public universities in Jordan using stratified sampling. Survey questionnaires and semi-structured interviews were used to collect data. Out of 566 students, 64 responded to the

survey questionnaire. The study found that EFL students' speaking skills in English were perceived to be inadequate, and reasons were provided to explain this perceived difficulty. The findings revealed a low level of speaking proficiency among EFL undergraduates, coupled with minimal emphasis on teaching speaking skills at the university course level. This study also underscored challenges such as communicating in L1, large class sizes, and time constraints. In contrast to the aforementioned studies, this study concludes that speaking difficulties among students are caused by communicating in L1, large class sizes, and time constraints. Using L1 as a means of communication impedes the improvement of speaking skills by reducing opportunities to practice the target language (English). Therefore the more practice students have using the target language, the greater their chances of developing proficiency.

Methodology

This study is descriptive and analytical and uses a qualitative approach to collect data, specifically through student interviews. The study involved 30 Libyan EFL undergraduates enrolled in the English department at the Faculty of Arts and Science in Messellata. The participants were selected based on their willingness to take part in the study. Regarding data collection methods, student interviews were utilized to gather the subjects' perspectives on various topics. Following the interviews, the data was transcribed, coded into themes, and then linguistically analyzed by the researcher, resulting in the following findings.

Results

The interview aimed to explore the perspectives of EFL university students on the following aspects:

Self-introduction.

Attitudes and motivations for learning the English language.

Challenges in learning English in Libya.

Ways to make learning English more engaging.

Positive attributes of teachers.

The primary goal of the interview was to assess the students' speaking proficiency. This evaluation was based on the following criteria:

Vocabulary accuracy

Pronunciation accuracy

Grammar accuracy

Fluency

Respondents' Vocabulary Accuracy

Regarding vocabulary accuracy, six of the interviewees demonstrated a strong command of vocabulary, while another six displayed good knowledge of vocabulary. In contrast, eight interviewees have adequate vocabulary proficiency, while another ten have inadequate

vocabulary skills. This indicates that the vocabulary proficiency of the ten interviewees is lacking, potentially impacting their speaking ability.

Respondents' Pronunciation Accuracy

Regarding the interviewees' pronunciation accuracy, it is evident that only four respondents have shown very good pronunciation, while five respondents have also shown good pronunciation. However, the results showed that the pronunciation of eight respondents is acceptable, while thirteen others have unacceptable pronunciation. This suggests that students struggle with speaking due to imperfect pronunciation.

Respondents' Grammatical Accuracy

Based on the interview results, it was found that ten respondents possess the ability to construct accurate English sentences, indicating their grammatical proficiency to be within the range of good to very good. Interestingly, the findings revealed that only 10 out of 30 participants demonstrated acceptable grammar, indicating that the majority of respondents lack a strong grasp of grammar. This deficiency adversely affects their speech.

Respondents' Fluency

Out of thirty respondents, twenty are not fluent in their speaking, except five whose fluency ranges from very good to good. It is worth noting that the remaining five participants were deemed acceptable. What can be observed is that fluency is correlated either positively or negatively with other language aspects like grammar, vocabulary, and pronunciation. In other words, if learners are aware of these language features, they can speak fluently and vice versa.

Discussion

This study aimed to assess the speaking skill challenges faced by Libyan EFL undergraduates. The study's findings showed that the majority of students experience difficulties in speaking, including a lack of vocabulary, incorrect pronunciation, lack of grammatical accuracy, and lack of fluency. The study results indicated that the participants demonstrated a low level of speaking proficiency, particularly in vocabulary, pronunciation, grammar, and fluency. In terms of vocabulary accuracy, the findings suggested that the students have a poor command of vocabulary, which may contribute to their uncertain or weak speaking ability. The use of inadequate teaching materials, lack of skilled and well-trained teachers and improper teaching methods are considered the main factors behind this weakness. Similarly, Eltayeb, et al. (2015) stated that the student's proficiency level remains low and the teachers are not adequately trained to adapt the materials to the appropriate level and facilitate conversations from the textbooks. Skilled and well-trained teachers, who can customize the existing materials, effectively implement vocabulary teaching strategies, and establish a positive classroom environment may be the answer.

Regarding pronunciation, the interview results indicated that it is a common speaking difficulty. This is evidenced by the majority of participants showing inadequate pronunciation. Possible reasons for this may include a lack of exposure to the target language environment, unqualified teachers, ineffective teaching methods, and unsuitable learning environments. Afshar, et al. (2016) argued that language labs should offer EFL students the chance to enhance their speaking abilities. This means a good language lab should have quality audio-visual equipment like video projectors and computers, along with language

software such as pronunciation checkers. It should also give EFL students Internet access to authentic materials and exposure to real-life situations. Educational policymakers and those involved in teaching and learning processes should consider the above-mentioned facts, or else pronunciation will hinder the achievement of speaking competence.

All respondents exhibited difficulties in speaking with grammatical accuracy. This outcome may be linked to the underdevelopment of not only grammar but also other language skills and areas during basic and secondary education, attributed to factors such as lack of exposure to the target language environment and under-qualified teachers. Therefore, the issue should be addressed at its core. From primary school or even kindergarten, Eltayeb et al. (2015) argue that students' speaking skills are negatively impacted by the low income of their families. This affects all aspects of their lives, including their education, as they struggle to balance attending classes with making a living. As a result, their proficiency in English, especially spoken English, is negatively affected. However, the findings indicate that most students lack fluency. This can be attributed to the fact that fluency necessitates a strong grasp of vocabulary, pronunciation, and grammar. It is worth mentioning that fluency is either positively or negatively associated with other language aspects, such as vocabulary, pronunciation, and grammar. Developing these features enhances fluency and vice versa. In addition to the factors mentioned above, communicating in L1, mother tongue interference, large language classes, and the low salary of English language teachers are obstacles that obstruct EFL learners from reaching higher levels of speaking proficiency, and English language proficiency in general. Furthermore, psychological factors such as fear of making mistakes and hesitation may be barriers to developing speaking skills in English.

Recommendations based on the study include the need for qualified and well-trained teachers in schools and universities. English language syllabi should be tailored to students' learning needs and requirements, with an emphasis on sufficient listening and speaking courses, particularly for bachelor programs. Effective teaching and learning strategies that enhance language proficiency, particularly in speaking, should be implemented. Students should also be encouraged to use the language both inside and outside the classroom to compensate for the lack of a target language environment and develop their speaking skills.

English classes should be kept small to encourage greater participation. Extracurricular activities like English clubs can help students practice speaking, break down psychological barriers like shyness and hesitation, and motivate them to learn and use the language.

Conclusion

The objective of this study is to examine the challenges faced by Libyan college students when it comes to speaking. The study utilized a qualitative approach, specifically conducting student interviews. The study focused on fourth-year English students at ELMergib University. The study found that students face several speaking challenges, including limited vocabulary, pronunciation and grammar accuracy, and lack of fluency. As previously discussed, it is evident that the decline in students' proficiency, not only in speaking but also in other language skills, can be attributed to factors related to teachers, syllabus, students, and the environment. The results suggest that English language teachers should receive thorough training and that the syllabus should be tailored to meet the needs and requirements of students. Additionally, effective teaching strategies and methods should be implemented to enhance students' proficiency and foster their enthusiasm for learning and utilizing the language. Encouraging the use of language outside the classroom will help students apply it in various contexts and situations.

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(الأدب كوسيلة لتعزيز مهارات الاستماع والتحدث لطلاب اللغة الإنجليزية كلغة أجنبية على المستوى الجامعي
بكلية الآداب والعلوم-مسلاتة)

Literature as a Means of Enhancing Listening and Speaking Skills for EFL University-level Students
at College of Arts and Sciences-Missalata

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الملخص:

تهدف الدراسة الحالية إلى فحص وإثبات الآثار الإيجابية لتوظيف المواد الأدبية في تعلم مهارتي التحدث والاستماع باللغة الإنجليزية. بكلية الآداب والعلوم - مسلاتة - بجامعة المرقب. يواجه طلاب اللغة الإنجليزية العديد من العقبات في التحدث والاستماع. هذه المشاكل تعيق تطورهم لأنهم يفتقرون إلى المعرفة الاجتماعية والثقافية ولديهم مفردات غير كافية. والأكثر من ذلك، أنهم يجدون صعوبة في نطق بعض الكلمات واستخدام البنية النحوية الصحيحة. أجريت الدراسة على 40 طالباً من قسم اللغة الإنجليزية من خلال المنهج الوصفي التحليلي. وبناء على نتائج دراسة الحالة، فإن الأعمال الأدبية (الروايات، القصائد، الأعمال الدرامية) لها أثر كبير في تمكين قدرات التحدث والاستماع لدى الطلاب. وتكشف الدراسة أن الطلاب المستهدفين ضعفاء في التحدث والاستماع لأنه لم تتاح لهم الفرصة للقيام بالممارسة الشفهية والسمعية الفعلية من خلال الاستماع إلى اللغة الإنجليزية البحتة في سياقها الاجتماعي والثقافي ومن قبل الناطقين بها. وبالتالي، فإنهم يفتقرون إلى المفردات اللازمة والنطق الصحيح والتمييز بين اللهجات والتراكيب النحوية للتواصل باللغة الإنجليزية بشكل فعال. تساهم هذه العوامل في مشاكل احترام الذات لدى الطلاب، والإحباط، والقلق، وصعوبة فهم الكلمات غير المألوفة من السياق، والتي يمكن حلها بشكل فعال من خلال استخدام الأعمال الأدبية. الكلمات المفتاحية: التحدث، الاستماع، اللغة الإنجليزية كلغة أجنبية، اللغة الأصيلة، الكفاءة الاجتماعية والثقافية واللغوية

Abstract:

The researcher of the current study aims to examine and prove the positive effects of employing literary materials in learning English listening and speaking skills. At the College of Arts and Science – Missalata at Elmergib University. English language students face many obstacles in listening and speaking. These problems hinder their improvement as they lack social and cultural knowledge and have inadequate vocabulary. They have difficulty pronouncing some words and using the correct grammatical structure. The study was conducted on 40 students from the English Language Department through the descriptive-analytical method. Based on the findings of the case study, literary works (novels, poems, dramas) have a significant impact on empowering students' listening and speaking abilities. The study revealed that the targeted students are weak in listening and speaking because they did not have the opportunity to do actual oral and auditory practice through listening to pure English in its social and cultural context and by native speakers. Consequently, they lack the necessary vocabulary, correct pronunciation, and differentiating between accents and grammatical structures to communicate in English effectively. These factors contribute to students' self-esteem issues, frustration, anxiety, and difficulty understanding unfamiliar words from context, which can be effectively resolved through the use of literary works.

Key words: speaking, listening, EFL, authentic language, socio-cultural, linguistic competence

1.1 Introduction:

Due to the vital role of the English language in our world today, studying English has become an increasing desire among Libyan students in recent years. Many students have become aware that learning EFL can open many career options. Furthermore, when they learn English, they will have an easier time connecting with people from other countries in the future. Therefore, a considerable number of Libyan students enter universities to study English. Moreover, several students have joined the English department at the College of Arts and Sciences Missalata to improve their English and to increase their chances of obtaining a respectable job in the future. Some of those students have already finished their undergraduate studies in other majors. Although this may sound motivational to teachers of the English language, a lot of students graduate from university without mastering the language. Some of them cannot even communicate in English well. They even face difficulty producing complete, compound, and correct sentences. Upon looking back at the student's education path, it is startling to find out that they studied English for at least ten years before entering university- from grade five onwards.

Over the past several decades, scholars and researchers have emphasized the importance of reading and writing literacy as the two main elements for becoming proficient in English. As learning foreign language strategies progress, listening and speaking have become increasingly important. However, some English language teachers ignore this fact or lack the basic teaching strategies for listening and speaking during their classes. Since oral communication and comprehension are crucial parts of English language learning, there is a dire need to highlight the importance of employing more effective and alternative ways of teaching listening and speaking. In this paper, the researcher argues and asserts that integrating literary works in language classes can improve EFL students' speaking and listening skills.

1.2 Obstacles EFL Learners Face in Listening and Speaking:

The most common difficulties EFL students encounter in speaking and listening are inadequate stock of vocabulary, difficulty pronouncing some words, and using the correct grammatical structure. According to Idrissova et al. (2015), problems related to "pronunciation, the speed of delivery, new vocabulary or terminology, and concept" are associated with both skills (p. 277). Such difficulties make EFL learners unable to accurately convey their thoughts and feelings because their language skills are not strong enough. Moreover, they lack the essential vocabulary, pronunciation, and grammar to communicate in English effectively. Therefore, they struggle to understand what is being said and respond appropriately. Such problems are reflected in students' interactions with others in English. As a result, EFL learners may feel frustrated, anxious, and overwhelmed. These problems can lead to a decrease in motivation engagement, and impede their language development, making it difficult for them to reach their goals.

This happens as a consequence of much of their language learning being conducted in a classroom setting, without much opportunity to practice speaking and listening. Additionally, they often lack the cultural knowledge needed to understand the nuances of the language. Through literary texts and audio recordings, students can learn the language outside the classroom and gain a better understanding of the culture of native speakers. It can help them understand the language better and prepare them for real-life conversations.

1.3 Statement of the Problem:

- 1- Why do learners dislike listening and speaking classes?
- 2- Is there any benefit of using literature to improve English listening and speaking skills?
- 3- Are listening and speaking skills taught efficiently?

1.4 Hypotheses and Assumptions of the Study:

- 1- Listening and speaking skills are not taught properly. This hypothesis is based on the observation that students often struggle to communicate effectively, even when they have a

good grasp of the subject matter. It suggests that the current teaching methods are not providing students with the necessary skills to effectively communicate their ideas.

2 - Using literary works to teach the English language improves listening and speaking skills. By studying literature, students are exposed to a variety of different writing styles, as well as a range of grammar and language structures. This helps them to develop a better understanding of the English language and to become more confident in their ability to communicate. As a result, their listening and speaking skills can improve significantly.

1.5 Research Objectives:

1- To help EFL learners improve their listening and speaking skills. The researcher aims to encourage EFL learners communicate more accurately and effectively.

2- To improve the quality of teaching English as a foreign language in Libyan universities, specifically at the College of Arts and Sciences-Missalata / Elmergib University.

1.6 The Significance of the Study:

This study assists students in improving their communication skills. Moreover, it expands EFL teachers' horizons by urging them to use interesting and varied methods and exercises based on literary works. Moreover, it encourages the development of listening and speaking skills through the selection of purposeful stories and plays. This allows teachers to engage their students in meaningful conversations and foster connections between language and culture. Furthermore, teachers can use literature to increase student motivation and help them develop a deeper understanding of language. This, in turn, can make language learning more enjoyable and engaging for students.

1.7 Limitations of the Study:

Learning a foreign language involves incorporating the four basic language skills: listening, speaking, reading, and writing. However, the researcher does not intend to address the effectiveness of literature in teaching reading and writing skills. Considerable research was conducted to address such issues. The focus of the current study is limited to examining such effectiveness in teaching listening and speaking skills. Additionally, this study does not examine the efficacy of specific technologies in foreign language teaching. The case study is limited to the (second, third, and fourth-year) students of the English language at the College of Arts and Sciences- Missalata / Elmergib University. First-year students are excluded from the study because they have not been exposed much to literary contexts yet.

2.1 Literature Review:

This literature review examines the importance of speaking and listening skills in language learning. It looks at the role that literary works play in improving speaking and listening as well as language proficiency. The review aims to handle the challenges students face in speaking and listening and apply literature as a strategy to overcome them.

2.2 Language Learning and Speaking Skills:

When it comes to language proficiency assessments, speaking and listening are significant components of most language learning programs. The reason for this is that communication is the primary purpose of language. Since speaking is essential for a person to effectively communicate, listening and speaking are the most direct ways to measure proficiency in a language. Reading and writing are crucial. However, without being able to communicate verbally, a person cannot truly understand and use a language. Furthermore, being able to comprehend speech is a critical part of language learning, as it helps the learner understand how the language is used in real-world conversations.

At the beginning of the eighties and the advent of the language communication approach, fluency in speaking and communication competence became substantial objectives for language teachers and learners. This approach emphasized the importance of having learners be able to understand and produce the language in a way that was appropriate for real-world context. It, also, shifted the focus of language teaching and learning from memorizing

grammar rules and vocabulary to developing the ability to communicate effectively with others¹. However, some high school and undergraduate level teachers do the speaking test in written form. For instance, some teachers may ask students to answer a question in writing instead of having them carry out a conversation. This disregards the essential part of communication which is the ability to understand and be understood by others. It, also, limits the opportunity to practice speaking, since the only chance for students to do this is when they are asked to give a presentation or talk in front of the class. This concern is not only in Libya or the Faculty of Arts and Science - Missalata but also in many universities in most Arab countries. Researchers such as Aladini et al. (2020) have discussed a similar issue where speaking is limited to imitating conversations and conducting some exercises in written form (p. 558). In other words, most EFL classes are spent improving reading and writing skills. Consequently, students are not able to practice their speaking skills and develop their confidence in speaking English. Idrissova, Smagulova, and Tussupbekova are among the researchers who argue for the importance of speaking skills and consider it the most essential skill in language learning. Idrissova et al. (2015) state that “speaking and listening tend to be more important in human communication and daily life. As a fact, any language develops from listening and speaking” (p. 277).

Through speaking, learners can express their needs, thoughts, and ideas. However, mastering the speaking skill is burdensome for many learners because it requires social, cultural, and linguistic knowledge (Ahmed, 2020, p.185). Speaking is a complex skill that involves not only the use of language but also knowledge of social and cultural norms, as well as the ability to think on one’s feet and generate ideas quickly. It also requires learners to take feedback and adjust their language accordingly. All of these aspects make speaking a challenging skill to master. A student may be unable to properly respond to the questions or comments of a native speaker on a topic that they are unfamiliar with or to articulate themselves naturally and correctly. Altweissi et al. (2022) explains that developing speaking skills requires more than just proficiency in structure and language versions; it also requires the learners to understand how to use these structures appropriately in different situations (p. 10).

Since not all EFL learners can or have a chance to live in an English-speaking country and get exposed to the language and culture, exposing them to literary works can have a similar effect. Through literary works, students can learn about the culture and language of the English-speaking world and gain a deeper understanding of the language. Aladini et al. (2020) assert that including drama or music that reflects a certain culture can enhance the understanding of human relationships, as a key to improving “communication between humans locally or globally” (p. 575). Additionally, it provides them with the opportunity to gain insight into the culture, values, and beliefs of people from those countries. However, Ahmed (2020) mentions some of the significant impediments that hinder EFL learners’ speaking skill development. He determines a number of problems that have to be taken into account in teaching, such as managing learners’ sitting in class, learners’ different levels, insufficiency of supporting materials, interference with the mother tongue, and the absence of speaking tests (p.p. 185-186). Classroom instruction can be challenging when dealing with these issues. Instructors can facilitate the development of speaking skills. However, it is essential to create a relaxing and supportive environment, to provide appropriate materials, and to encourage practice to achieve satisfactory results. Therefore, learners are guaranteed to experience positive learning outcomes. Class, learners’ different levels, insufficiency of teaching materials, interference with the mother tongue, and the absence of speaking tests (p.p. 185-186).

¹ https://en.wikipedia.org/wiki/Communicative_language_teaching.

2.3 Language Learning and Listening Skills:

Language learning requires listening skills, whether one is learning a mother tongue or a foreign language. Students become acquainted with the target language gradually like children acquire their mother tongues. Firstly, they listen to others around them, then initiate with a few simple words. As a result, they can master full sentences before they even start learning to read or write. In this context, several researchers emphasize the importance of listening in the learning of languages. They suggest that listening should be the primary focus in language classes, as it is the foundation for building a more advanced level of language proficiency. The process of listening to a language provides students with an opportunity to become familiar with the phonology, intonation, and grammar of the language. This prepares them to comprehend and produce more complex language structures. Even if students do not understand all the words in a conversation, they can still comprehend what is being said by using context and intonation. Nevertheless, many English language teachers and instructors neglect this pivotal skill. A considerable number of English language teachers face difficulty teaching speaking and listening due to the lack of knowledge and strategies for teaching.

In addition, teachers avoid teaching listening because it is the weakest skill among Libyan students at the university level, particularly first-year students. This is because students lack the necessary listening skills to comprehend lectures and understand the course content. Furthermore, they are not used to the language used in the classroom. In an online course attended by the researcher from January to May 2022, a group of about 27 Libyan English language teachers concurred that they underestimated teaching speaking and listening due to the lack of educational equipment in the learning institutions¹. Furthermore, they see that listening activities are time-consuming and require careful preparation. Consequently, they don't educate and test students' listening adequately. They lack the necessary materials and resources to effectively teach listening. Therefore, they focus on other language skills, such as reading and writing, which are considered to be more significant. As a result, students do not gain the skills they need to understand spoken English. Moreover, learners themselves face challenges that prevent them from developing listening skills. To make matters worse, the limited resources available to students, such as textbooks and language teachers, also contribute to the lack of listening skills. Moreover, since English is usually not spoken at home, students often lack the opportunity to practice listening in their daily lives. Ultimately, this decrease in motivation can lead to a lower level of proficiency in English. All these obstacles are because listening is not typically taught in Libyan schools and universities or it is disregarded.

Ulum (2015) conducts a study about listening difficulties and asserts the necessity to develop listening strategies to facilitate EFL learning. He puts forward problems that hinder students' listening. Among these problems is that learners find it difficult to differentiate and identify diverse accents. While listening, they have difficulty keeping track of what is being said. In addition, if a speaker pronounces a few words unclearly, some sounds are missed, and the listener is unable to comprehend what is being said. Furthermore, learners have difficulty recalling the meanings of familiar words they hear while listening (p.p. 74-75). Ulum asserts that learners struggle in listening classes due to a variety of other factors, such as their inability to recall words and information they already know. Furthermore, they find it difficult to grasp some words from certain English accents (p.72).

Students need to experience and be exposed to different accents. Not only American and British accents but also other accents where English is spoken as an official language worldwide like Australian, Indian, and West African...etc. This will help them to become

¹ <https://padlet.com/jeanniececil/libya-> Online course [English Language Program Professional Development. 2022-teacher-group-1-gmuoxgxtgkbaux8n

more flexible in their English language learning and better understand the nuances of various accents. Therefore, learners can deal with people from different nationalities. According to Harmer (1998), the essential purpose of giving learners listening activities is “getting students to listen to spoken English to let them hear different varieties and accents rather than just the voice of the teacher with its idiosyncrasies” (p. 97). He also indicates that exposing learners to listening assists them in gaining knowledge of the language subliminally. Harmer (1998) proposes that through this process, students “get used to the correct pronunciation, rhythm, intonation, pitch, and stress” (p. 98).

2.4 Language Learning and Literature:

Studying literature improves language skills and provides an opportunity to develop compassion and empathy. Incorporating literature into EFL learning reinforces speaking skills and encourages learners to act, imitate, or sympathize with characters from literary works. Since students listen to authentic literary works, they start to imitate and feel free to express their sympathy with the characters they find in a particular work whether it is drama, novels, or poetry. Also, literature can spark creativity and imagination, allowing readers to explore new ideas and perspectives. For instance, learning popular novel can open up conversations about topics such as morality, community, and personal identity, providing readers with a new way of looking at the world. Furthermore, literature can also inspire and motivate students. It can help them improve their vocabulary and the beauty of language in their speech. As learners are exposed to a variety of words, they can gain a better understanding of how to use them in their own writing and speaking.

Hişmanoğlu (2005) is among the researchers who call for the use of literature in language learning. He states that, besides the authenticity, richness, and “personal involvement” of the literary materials, there are some other factors of using literature in EFL classrooms that literature discusses universal, un-frivolous, and diverse topics (p. 54). Foreign language learning is not confined to learning grammatical rules, lexical terms, and conjunctions. Further, it includes the awareness of how to interact in different social contexts. Learners should understand when and how to employ a suitable language to communicate as native-like speakers (Alseed, 2022, p. 692). Although many EFL learners face difficulties getting exposed to the language, in English-speaking countries, listening to and watching valuable and authentic literary works (e.g. drama, novels, and poetry) provides them with the required competence. Hişmanoğlu (2005) states that since literary works address real-life situations, they serve as ideal models for speaking in daily life. In this way, students become familiar with the target language used in the everyday speech of Anglophones. Learners recognize accurate pronunciation and the appropriate use of words and phrases. Moreover, learners gain knowledge of the culture and lifestyle of speakers of that language (p. 54). Furthermore, Abdalrahman (2021) argues that language cannot be used properly unless one understands the cultural context. Individuals' language reflects their cultural norms, values, customs, and traditions. As a result, literature can serve as a platform to learn language and culture (p. 9).

Drama also helps learners better understand the language and its structure, as they need to think carefully about their speaking and actions. Furthermore, it helps learners gain insight into different cultures and values. Casteleyn indicates the cruciality of drama and theatrical performance in improving EFL learners' speaking skills. The theatrical performance can help learners develop their self-confidence and speaking fluency. Training learners' oral activities play a vital role in reducing learners' anxiety and shyness. These activities help learners to experience the foreign language in unique and different situations. Moreover, drama can effectively improve learners' communicative potency. While students do some training, they get familiar with speaking and behaving like native people. Casteleyn asserts that drama can also promote learners' motivation for more practice. Learning languages can be practiced in a safe and comfortable environment via activities such as role play and improvisation. As a

result, they begin to feel more confident and less afraid of making mistakes when speaking. The activities can also be enjoyable and engaging, which encourages them to practice more often. Hence, it certainly enhances their mindset growth and improves their speaking skills in general (cited in Lee et al., 2021, p. 255).

Through acting in a stage-like setting, learners' confidence will increase gradually. As a result, they expand their "understanding of human relations" and their knowledge of cultural diversity. According to Aladini (2020) studying literature promotes the development of our "understanding of human relationships in different subjects. It also helps in ESL acquisition and makes students feel a sense of empowerment when facing acting and the teacher becomes more of a facilitator than a conductor. They find it fun and easy to step on the shoes of characters of stories" (p. 558).

Harmer (1998) advises that the most effective way of teaching listening is through playing tapes of various kinds of listening such as "new broadcasts, poetry [...] songs with lyrics, speeches..." (p. 98). Encouraging learners' choral reading of literary materials, and making them watch videos helps improve their speaking and listening. Furthermore, having learners repeat the tapes, or answer questions related to the content they heard, can help them develop their listening skills even more. In the same context, Lee et al. (2021) suggest that drama reinforces listening skills. In addition, it promotes speaking skills by providing learners with "verbal and nonverbal" language features such as intonation, tone, amplitude, and voice rate" (p. 254).

Using literature as learning material boosts learners' understanding and perception. They recognize the relations between characters and then connect them to the characters from real life, rehearsing and acting some scenes. Hişmanoğlu (2005) claims that oratory skills get enhanced and thoroughly promoted through literature and drama-based exercises (p. 60). This ultimately leads to a higher level of self-confidence and speaking competencies.

2.5 Teaching Strategies and Literature:

Teaching speaking and listening skills is as demanding as teaching any other language skills like reading and writing. It requires an understanding of the language, how it is used and the ability to create meaningful interactions. Teachers must be able to design appropriate activities to develop students' speaking and listening skills. Students often find it challenging to learn speaking and listening skills because they require more interaction and engagement than reading and writing. Therefore, teachers should use an appropriate strategy to fulfill the teaching aims and satisfy the learners' needs. Employing literature in EFL classrooms requires teachers' awareness of when and how to use the appropriate activity. While applying literature in listening and speaking classes, teachers should take into account learners' interests and shortcomings.

The efficient learning of these skills necessitates students to get engaged. Therefore, the learning materials should attract students' attention and increase their motivation. Otherwise, students may face obstacles that hinder their learning. Such as being distracted, anxious, and shy. Teaching strategies should fit the individual needs of each class and should be adapted over time to ensure that students are always engaged and challenged. Additionally, teachers should make use of a variety of activities, such as games and simulations, to ensure that students are actively involved in the process of learning

Teachers should shed light on the significance of language practice. Since most speaking and listening activities require interaction and group work. Some researchers, such as Hişmanoğlu (2005) advocate employing literature in teaching these expressive and receptive language skills. He indicates that "Oral reading, dramatization, improvisation, role-playing, pantomiming, reenactment, discussion, and group activities may center on a work of literature" (p. 59).

3. Methods

3.1 Instruments and Data Collection:

The data of this study are gathered employing descriptive and analytical ways of collecting data. Essentially, a questionnaire is used in this research to collect data. The researcher intends to use this technique to elicit the most truthful information. The questionnaire was distributed to 40 students from the English department at the College of Arts and Sciences - Messalata. Therefore, the researcher can gain in-depth information about their experiences learning speaking and listening skills.

3.2 Population of the Study:

The case study of this research is the students of the English language department at the College of Arts and Sciences - Messalata / Elmergib University. Equal numbers of study participants are chosen randomly from the two branches (Translation and Applied Linguistics/ Literature). The target participants are from the 2nd, 3rd, and 4th years in the English department in the academic year 2022/2023. There are two key reasons behind this choice. Firstly, first-year students are not exposed thoroughly to speaking and listening classes yet. Moreover, they are studying general subjects, therefore they were excluded from the study. Secondly, the participants are chosen from both branches to make sure that students can improve their listening and speaking skills through their exposure to literary materials throughout their studies.

3.2 Research Methods:

Descriptive and analytical methods are employed to describe and analyze the data obtained from the participants of this research. The research questions are taken into consideration in designing the questionnaire and the interview questions. Therefore, the information and the findings gathered from the participants are clear evidence of whether studying literature helps enhance students' speaking and listening of English as a foreign language or not.

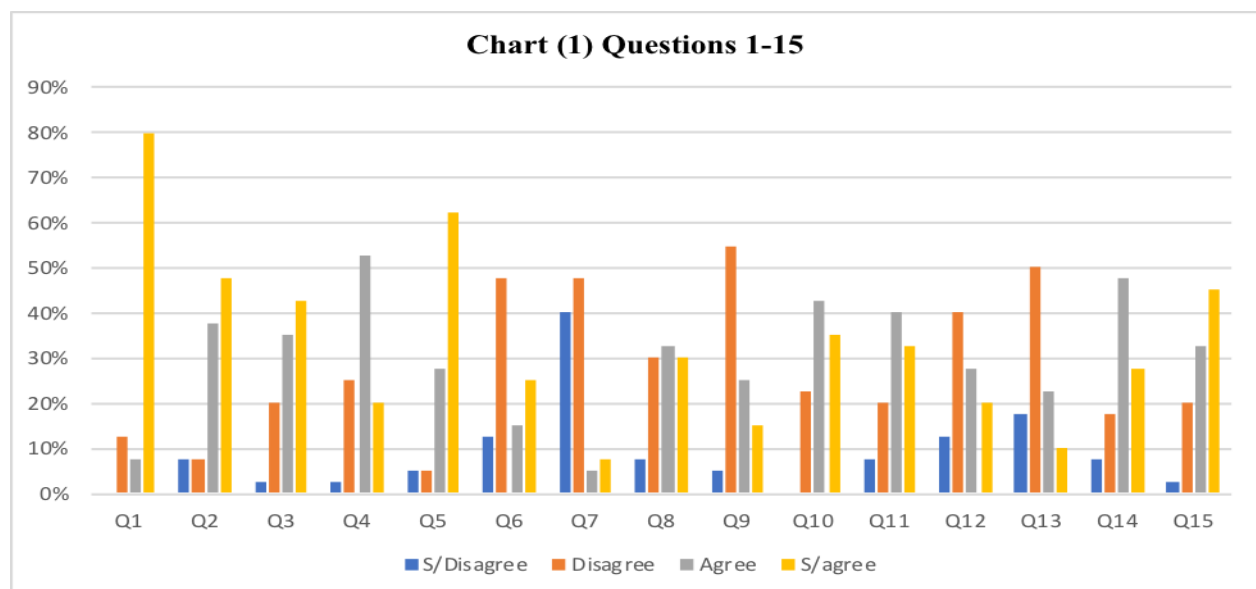
4.1. Data Analysis, Discussion Findings

This chapter is devoted to outlining and discussing the findings of the following questions:

- 1- Why learners do not like listening and speaking class?
- 2- Is there any benefit of using literature to improve English speaking and listening skills?
- 3- Are speaking and listening skills taught efficiently?

The total of the participants in the distributed questionnaire are 40 students from the 2nd, 3rd, and 4th year students in the English Department/ College of Arts and Science Missalata. Students were asked to answer the questions freely and honestly.

4.2. Chart (1): Questions related to students' listening and speaking skills.



4.2.1 Students feel anxious when they have a listening or speaking class.

The majority of ESL learners at the College of Arts and Science Missalata dislike listening and speaking in class. They perceive that having listening and speaking classes is very challenging and overwhelming. Most of the students (80%) strongly agree, and (8%) agree that they feel nervous and stressed when they have listening or speaking class while (13%) disagree and no students strongly disagree. This reveals the reason why students get frustrated with speaking and listening.

4.2.2 Students get distracted if they don't understand the meaning of some words when they are listening.

The majority of the students answered that missing some words from a listening extract makes them distracted. About (48%) of the students strongly agree, while (38%) agree. While (8%) of them strongly disagree and (8%) disagree. The answers show that it is logical to get distracted, especially if the listening topic is unfamiliar or it doesn't interest them.

4.2.3 It is frustrating to guess the meaning from the context.

From the answers, it can be seen that (43%) of the students strongly agree that it is discouraging if you encounter a difficult word. Students do not tend to predict the meaning of unknown words from the context. In addition, (35%) agree with the statement, while (20%) of them disagree, and (8%) strongly disagree. The answers show the students' inability to get the meaning based on context due to their limited knowledge.

4.2.4. Listening to some words makes students feel that these terms are familiar, but they cannot recall their meaning.

The answers to this question demonstrate that more than half of the students agree (53%), and (20%) of the respondents strongly agree that they feel some words seem to be familiar; however, they are unable to remember their meaning. About (25%) of the students disagree, while (3%) strongly disagree. The results assert that students lack opportunities to practice listening.

4.2.5. Students cannot remember the details they hear in the listening.

Most students assert they cannot remember the details while practicing listening in class. Where (63%) strongly agree and (28%) agree. Only (5%) disagree, and a few students (5%) strongly disagree. Students' answers indicate that it is reasonable not to remember all the details in listening. Even native speakers of English cannot do that unless they are fully attentive and practiced.

4.2.6. The students can comprehend the listening text despite the accents of the speakers.

It is noteworthy that (48%) disagree that the speakers' accents do not affect their listening comprehension. About (25%) of them strongly agree, and (15%) agree, while (13%) strongly disagree that speakers' accents have an impact on their comprehension. Students are, therefore, not exposed sufficiently to the target language by native speakers, who place much emphasis on pronunciation, stress, and intonation.

4.2.7. Students follow specific strategies while they are listening to a recording in class.

From the answers, it seems that most students do not use specific strategies during listening. About (48%) disagree, while (40%) strongly disagree. Only (8%) strongly agree, and (5%) agree that they follow specific steps during the listening task. These clarifications reveal one of the causes that led to the student's poor performance in listening.

4.2.8. Speaking in class causes students to feel nervous.

More than two-thirds of the students express that they experience anxiety if they are asked to speak in class. The percentages show that (33%) agree and (30%) of them strongly agree. Likewise, (30%) disagree, and a few students (8%) strongly disagree. There is a strong indication from the answers provided that some students may face self-confidence issues and do not practice speaking in class, which is unacceptable at the undergraduate level, where self-confidence issues are a concern that may affect academic performance and their well-being.

4.2.9. Students practice speaking English with their friends after they finish their lectures.

A substantial number of the students confirm that they do not practice speaking with their colleagues outside the classroom. (55%) disagree, a quarter of the students (25%) agree, (15%) of the students strongly agree, and a few of them (5%) strongly disagree. The results indicate that the majority of the students neither practice speaking in class nor outside the class. Consequently, students are unable to improve their speaking skills.

4.2.10. Performing the task in a group gives students more freedom to speak.

According to the answers (43%) agree. In addition (35%) strongly agree that they like to work in the classroom within a group. While (23%) of the students disagree and (0%) strongly disagree. The statistics provide clear evidence that group-based speaking activities can positively enhance speaking skills.

4.2.11. Many students feel shy in front of their teachers or classmates when they mispronounce some words.

It is interesting to notice that almost three-quarters of the students feel embarrassed if they pronounce words - in front of their classmates- incorrectly (40%) agree, (33%) of students strongly agree, and (20%) disagree. Only (8%) of the students strongly disagree and indicate that they are not anxious about making mistakes. Concerning the previous question, the participant responses reveal that most students hesitate to participate unless they are sure that they have the correct answer. The tendency of students to avoid mistakes may seriously impede their ability to speak and listen effectively.

4.2.12. The chosen topics for speaking class motivate students to speak.

The data seem to suggest that more than half of the students claim that the chosen topics for speaking do not evoke them to speak. (40%) of the students disagree with the statement, and (13%) of them strongly disagree. Correspondingly, less than half of the students declare that the topics are provocative (28%) agree, and (20%) strongly agree. The participants' answers vary. Consequently, it indicates diversity in the speaking topics.

4.2.13. Students feel that their speaking skills have not improved much since I started studying in college.

Remarkably, more than half of the target population reveal that they have developed their speaking skill and can see this improvement in their performance. (50%) disagree with the statement, and (18%) strongly agree. However, less than a quarter of the students (23%) agree that they cannot see any progress, and one-tenth of the students (10%) strongly disagree. The results show a significant positive energy among English language learners that encourages them to learn despite the difficulties.

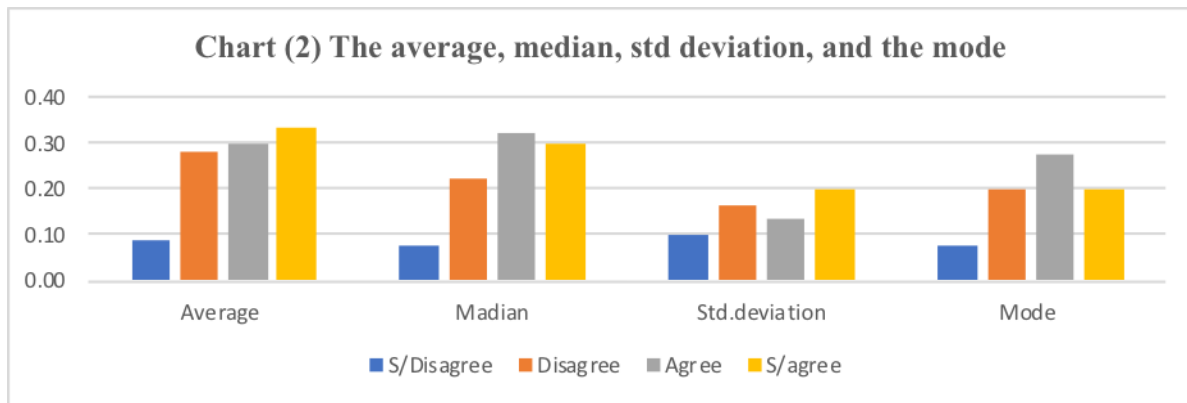
4.2.14. Students get enthusiastic about speaking when they hear or see native speakers talk in English.

Surprisingly, just above three-quarters of the target population of this study express their passion for speaking when they see or listen to native speakers. About (48%) of the students agree, and (28%) strongly agree. Few students (18%) disagree, and only (8%) strongly disagree.

4.2.15. Most students hesitate to participate in class discussions, though they know the answer.

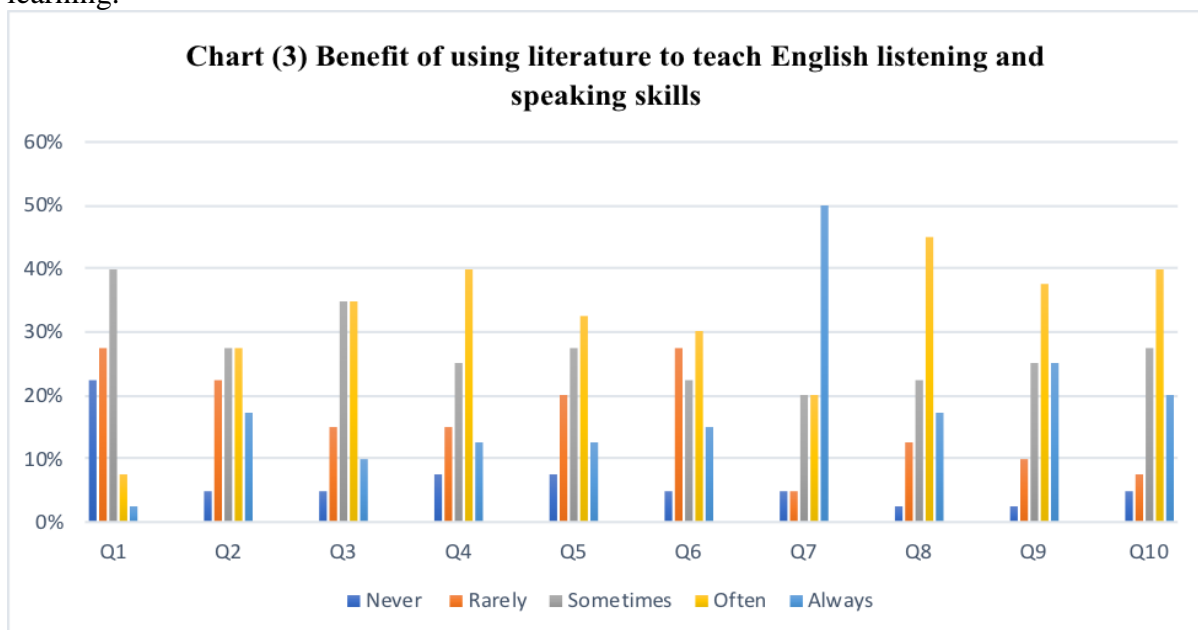
According to the statistics, more than three-quarters of the students are discouraged from participating in class discussions because they feel uncertain about their answers (45%) of the participants strongly agree with the statement and (33%) agree. In comparison, about two-tenth (20%) disagree, and (3%) strongly disagree. Authentic language exposure and motivating students to take risks are the only ways to resolve students' speaking difficulties.

The following bar chart illustrates the average, median, std deviation, and the mode.



4.3. Question related to the benefit of using literature to teach English speaking and listening skills.

Students are asked more questions to examine whether literature benefits English language learning.



4.3.1. Listening to English songs helps students improve their English.

Students are asked how often they listen to songs in English. About (40%) of the students answered sometimes, while more or less half of this proportion answered rarely (23%). However, a tiny minority of the students seem to listen to English songs a lot. About (8%) of the students say often, and (3%) always. The results indicate that most of the participants do not listen thoroughly to English songs which in turn can enhance their comprehension to improve their pronunciation.

4.3.2. Reading literary books and watching movies and documentaries in English helps students to gain more vocabulary and become familiar with various English accents.

The participants' answers indicate that almost three-quarters of the students watch movies and read authentic materials. About (28%) of the students said sometimes, Similarly, (28%) of the students answered often. And (18%) of the students declare always. Only less than a quarter of the students rarely watch movies and documentaries, and a few others (5%) never do so. The statistics significantly show that the majority of the respondents read literary books and watch movies which is positive.

4.3.3. Students feel relaxed and understand vocabulary better when they watch a movie in English.

A significant majority of the respondents declare that their understanding improves and they feel more comfortable when they watch a movie in English. About (35%) said often an equal percentage (35%) indicated sometimes and (10%) said always. While (15%) answered rarely and (5%) never.

4.4.4. Watching a play, makes students incline to speak the way they hear people in the play talking.

Surprisingly, almost three-quarters of the students seem to be prone to speak the way that the characters of the play do. (40%) of the students often do so, In addition, (25%) sometimes and (13%) always. Opposed to rarely (15%) of the participant students and only (8%) never. It is promising that students' fluency will improve gradually. The more students watch English dramas and movies, the better their listening and speaking skills will be. Through listening, they place a greater emphasis on word stress and intonation. As a result, they gain a deeper understanding of the culture of the native speakers. The more students watch English dramas and movies, the better their listening and speaking skills will be. Through listening, they place a greater emphasis on word stress and intonation.

4.4.5. Watching and listening to poetry read by someone helps students to comprehend the poem faster.

The answers show a significant positive effect, where about (33%) often understand a poem better if it is read by someone else. About (28%) of the participant students answered sometimes. Around (13%) said Always, (20%) rarely, and a few numbers of students (8%) replied never. The participants' answers reveal that some students prefer listening to poetry read by someone else because reading a poem with rhythm reinforces the conception of the hidden meaning that goes beyond words.

4.4.6. Listening to a literary work helps students enhance their listening skills more than listening to sentences or extracts from the textbook.

Approximately three-quarters of the respondents provided that their listening skills improved when they listened to a literary work by native speakers rather than listening to any other extract that may not meet their interests. (30%) of the students answered often (23%) sometimes and (15%) always. However, about a quarter of the students mentioned that they rarely (28%) and (5%) never felt any difference. As a result of literary works, students are able to acquire listening strategies and language that can be applied in a variety of contexts.

4.4.7. Using literary works in speaking and listening classes helps students to recognize different sentence structures.

Dramatically, the participant students conclude that literary works improve students' understanding of using diverse sentence structures. almost half of the students (50%) said always and (20%) often, (20%) sometimes. Only (5%) rarely and (5%) of participant students never.

4.4.8. Reading or listening to short stories or plays makes students feel comfortable as they don't need to concentrate on every word.

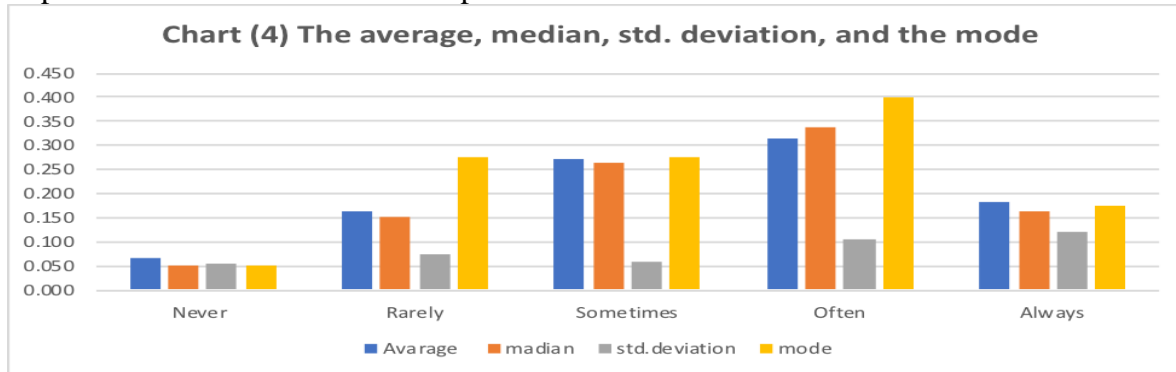
A significant majority of the students provide answers that denote students feel comfortable engaging in a discussion related to reading or listening to the short story. (45%) often, (23%) sometimes, and (18%) always. About (13%) rarely and (3%) never. The results show that listening to short stories makes students feel relaxed. As a result, they are more motivated to learn and get the most out of the process.

4.4.9. Watching movies and listening to stories help students increase their stock of vocabulary.

A large portion of the students' answers show that stories can expand students' vocabulary. (38%) of the students answered often, (25%) always, (25%) sometimes. A small minority of students (10%) answered rarely and only (3%) never noticed any improvement.

4.4.10. Listening and watching a literary work encourages to participate in the discussion part as the students get knowledge of the speaking topic and relate it to situations from daily life.

Approximately nine out of ten students indicate that literary works motivate students to engage in class discussion. (40%) of the students answered often, (28%) sometimes, and (20%) always. A small minority (8%) rarely and only (5%) never see such improvement. Through literature, students become familiar with the speaking topic; consequently, it improves their communicative competence.



5.1. Conclusion

A core objective of the presented study is to investigate the potential benefits of literary works that can boost learners' speaking and listening abilities. It has proved that implementing literature in learning both oral and auditory skills is significant. The outcomes determined that through incorporating literature, students enjoy the learning process. Furthermore, literature can also increase students' motivation and engagement in the learning process. Literature can also help students to better understand and appreciate the English language. Learners' self-confidence increases; therefore, they feel relaxed to express their ideas, thoughts, and feelings. Literature can also foster a sense of community as learners work together to discuss and analyze the text. Reading literature can also open up learners to new ideas and perspectives. In addition to developing listening strategies, learners' socio-cultural knowledge and cognitive and communication competence can be highly improved. They seem willing to engage in discussions about different topics and use various sentence structures.

5.2. Recommendations:

Since literature is full of universal wisdom and experience, this study opens the floor for further studies:

- 1- To generalize the findings of this paper on EFL learners in Libyan universities, since this study is a case study on students of the English language department in the College of Arts and Science -Messalata - Elmergib University.
- 2- To use literary sources not only in EFL teaching to gain crucial language skills but also to cultivate and improve the learners' social skills.
- 3- To afford the English language department with a language Lab provided with the latest technology and audio and visual equipment that enable teachers and learners to get the most benefit of their learning time in the college.
- 4- Adopting the communicative approach and spending more time practicing speaking and listening and focusing on the activities that enhance group work to ensure that students feel comfortable and relaxed to participate.

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(استكشاف تحديات ودوافع الطالبات الجامعيات المتزوجات بقسم اللغة الإنجليزية مسلاته)

Exploring Challenges and Motivations of Female Married Undergraduate Students English

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الملخص :

يسعى هذا البحث "استكشاف تحديات ودوافع الطالبات الجامعيات المتزوجات بقسم اللغة الإنجليزية مسلاته لتحليل المشكلات التي تواجه الطالبات المتزوجات في سعيهن للحصول على شهادة جامعية وهذه التحديات مرتبطة بالدراسة الجامعية وبالمجتمع والثقافة الليبية علاوة على ذلك يسرد أسباب ودوافع هؤلاء الطالبات في رغبتهم في تحصيل التعليم حيث يتم استخدام النسب المئوية لتفسير وتحليل نتائج الاستبيان التي جمعها من هؤلاء الطالبات. أثبتت النتائج أن التحدي الأكبر ينبع من ازدواجية أو تعدد الأدوار التي يؤديها هؤلاء الطالبات وعلى الرغم من هذه العقبات فإن رغبتهم الشديدة في الحصول على درجة العلمية الهامهم على المثابرة وفي النهاية فإن جودة التصميم والإصرار في مواجهة هذه العقبات هي التي حددت هؤلاء المشاركات على انهن زوجات وامهات وطالبات مسؤولات".

الكلمات المفتاحية: استكشاف، تحديات، ودوافع، الطالبات الجامعيات، المتزوجات،

Abstract:

This research on "Exploring the Challenges and Motivations of Female Married Undergraduate Students English Department, Mslata" analyses the problems encountered by the respondents (married students) in their pursuit of a college degree. Such challenges are relative to the family the college and to the Libyan society and culture. Furthermore, it recounts the reasons /motivations of these students in wanting to achieve an education. Frequency counts, percentage and ranks are used to interpret and analyze the results of the survey collected from these respondents. Findings proves that the paramount challenge emanated from the duality or multiplicity of roles that these respondents performed. Nonetheless, despite these obstacles, their desire to obtain a degree has inspired them to persevere. In the end, the quality of determination and persistence in the face of such obstacles has defined these respondents as responsible wives and mothers and students.

Key words Challenges, Motivation, Nontraditional student, Undergraduate.

Introduction

The common notion of the undergraduate years is thought of as a time of self-discovery, exploration and independence but what happens to those values when the college students are married especially female undergraduate students. Marriage is not perceived on individual terms but rather is considered as a partnership in which each member sacrifices some of his or her autonomy (McQuillan, 2005). Adebayo (2006) observed that female married students generally are faced with a number of stressors. These include continuous evaluation, pressure to earn good grades, time pressures, unclear assignments, heavy workload, uncomfortable classrooms, and relationship with family and friends.

Having to study poses challenges for women due to their family responsibilities and several challenges arise when these individuals tend to negotiate the role of university students with their role inside of marriage and the family. These students are usually considered nontraditional students. Nontraditional student is defined as any female student who does not fit the typical schema of a university student. In other words, she is a member of the working - class, has obligations outside of her school work, she has many roles such as mother, wife, caretaker, employee, and finally student; thus to this category belongs the respondents of this research. According to the National Centre for Education Statistics of the United States

America (USA) (Choy, 2002; Horn, 1996), non- traditional students have one or more of the following characteristics; delayed enrolment in college, part time attendance, full-time employment, may have or not have spouses, children and other dependents. Adjusting to an academic setting can be difficult for all students, no matter what stage of life they are in. The rigorous demand of the university -level courses coupled with the patriarchal values of the institution can be overwhelming for even the most studious students. Instructors expect more with less guidance and may seem unapproachable to new students who have questions. Unlike a typical college student who moves from one dependent realm to another, however, non - traditional female students experience dramatic life transitions when entering the higher institution. They often struggle with this transition because they feel insecure in their new role and anxious about the perceived loss of structure in their lives (Haynes -Burton, 2008). Along with possible personal feelings of inadequacy, non- traditional women may feel overwhelmed by their numerous responsibilities which often take precedence over school work. Nonetheless, not all non-traditional women feel uncomfortable entering university. Because of their life experiences, some women feel adequately prepared for university and find themselves contributing more frequently in classroom discussions than their classmates. While traditional students often go to college because their parents expect them to, non-traditional women choose to go to school to improve themselves or their quality of life, and they may exhibit an eagerness to learn that other students do not display. In fact, some women find it empowering to seek higher education while working and sustaining a family, no matter how difficult it may be. Inasmuch as the researchers have members who belong to the nontraditional group, this gave them the impetus to tackle an investigation on the obstacles and reasons why these researchers are still in pursuit of a college degree despite the rigors and difficulties of being a wife - mother - student. From this research, they would attempt to find out the situations of all the nontraditional students particularly the female married students in the English Department of the College of Arts and Sciences.

Statement of the Problem

This research focuses on "Exploring the Challenges and Motivations of Female Married Undergraduate Students in the English Department of Messalata". Specifically, this research provides answers to the following questions:

1. What are the challenges or difficulties that these students encounter while studying?
2. What are the motivations of these married students in their desire to continue their studies and finish a degree?

Theoretical Framework

Married women from time immemorial have been saddled with many family responsibilities and are traditionally assigned many roles including custody of children, maintenance of the home, feeding and preservation of the family health. Thus, married undergraduate students are also expected to perform duties as wife and mother, in addition to fulfilling their academic responsibilities. Within marriages, the strain faced can include, but are not limited to quarrels between spouses, feelings of exhaustion and resentment over inequitable divisions of household labour (McRoy & Fisher, 1982; Pittman, Kerpelmen & Solheim, 2001). Despite stress from academic pursuit, these married students persevere to attain their goal, knowing that in the end, the family as well as they themselves will derive advantages like self fulfillment and recognition within their community.

Hence, this study is anchored on the Exchange Theory. Exchange theory is based on the notion that people are motivated to engage in behavior based on a desire to maximize rewards.

In the context of this research, the female undergraduate married students take on the multiple roles of wife, mother and student with the aim of being rewarded with their goals of self-fulfillment or better acceptance and prestige into the culture they were born into.

Significance of the Study

This study will provide invaluable assistance to the following: For the female students in the English Department, this research dealing with marriage and undergraduate studies while

pursuing a career in a male dominated society, will hopefully encourage other female students to enter certain professions suited to their supposed, gender assigned caretaking qualities and to pursue professions where they will be allowed to balance family and career.

For the English Department of Messalata, because of the novelty of this topic, the researcher hope that this study would serve as a substantial source of data and be utilized as a reference for further studies in the same realm of female roles as housewives, mothers and students.

For the students who intend to be married simultaneous with their pursuit of a degree, this research hopes to convey information relative to common challenges met by nontraditional students. However, despite these obstacles, the researcher believes that these learners can be as successful as other students, if they only possess the proper motivation and firm determination to complete their goal.

For the teachers of these nontraditional students, the results of this study could also be an eye opener for them to be more tolerant and understanding of these students and probably substitute other lecture activities with home tasks that can be done in place of missed actual lectures.

Review of Related Literature

Many scholarly works guided the researcher to a deeper understanding of this present study.

Among this study and literature where the areas of concern on difficulties of the respondents have been investigated by various researchers. Their motivations for pursuing a degree amidst these obstacles have been investigated as well.

Researcher is studying the academic side of the conflict between school and marriage demands from students have examined how outside influences such as family and work impact academic achievement and retention rates among adult students (Benshoff, 1991; Noel, Levitz & Saluri, 1985).

A recent study by Home reported that the greatest stressors were school-family conflict, low incomes, course work, and children were all factors in role strain in female students (Home, 1992, 1997, 1998; Home & Hinds, 2000). Role strain from increased roles and their demands and from time conflicts was associated with high stress, depression, and anxiety in women students (Carney-Crompton & Tan, 2002; Darab, 2004)

A study conducted in the 1970's found that lack of networking ability pose a particular problem for married undergraduates' women students. These women were less able to engage in the after class socializing and networking that allowed their male counterpart to make the connections that would serve to further their career (Feldman, 1973).

Another constrain faced by the married undergraduate female student as revealed in a literature review by Benshoff (1993) is that women expressed guilt over their role as a student, over not being available for their children, over the quality and the expense of childcare, and over compromising their responsibility in the family as well as in the career world.

Along with possible personal feelings of inadequacy, non - traditional women may feel overwhelmed by their numerous responsibilities which often take precedence over school work. The number of hours Americans work each week has increased over the last 20 years, essentially adding an extra month of work to each year. Working mothers, many of whom are also students, work an average of 65 hours per week, including paid work for an employer and unpaid work in the home (Aronson, 1998).

Another study that examined stress in non-traditional students found that returning to school creates significant stress within the student's family and home life (Kohler Giancola, Grawitch & Borchert, 2009). Working-class women may be perceived as moving beyond the social class to which the family belongs, making them outsiders in their own home (Gardner, 1993).

Partners and children of female students may also feel neglected when time is devoted to schoolwork rather than family, causing conflict for the entire family.

In addition to the responsibility of jobs, bills, families, and community obligations, non-traditional women must learn to navigate through a patriarchal institution in which they feel invisible because of their gender, age, or circumstance (Kimmel, 2008).

Another issue for non-traditional students is that the students are parents (Benshoff, 1991). In order to attend courses; they must first secure reliable childcare which is an additional expense. The issue of childcare is also a particular stumbling block for women trying to re-enter the realm which is why women in graduate schools are often older and less likely to be enrolled fulltime than their non-married counterpart (Van Meter & Agronow, 1982).

Benshoff (1993) cites a study which found that women guilt over the school role is higher for women who have more traditional orientation towards marriage. However another study found that a woman in a marriage based on more traditional marriage expectations will experience less strain if she and her husband are both in agreement that her family role is the primary role (Van Meter & Agronow, 1982).

Some of the challenges that mature women students face include: process of socialization and gender roles; lack of encouragement by spouse; low self-confidence, and the under valuing of the benefits of higher education.

Married students and those responsible for the care of children have family responsibilities before enrolling in higher institution and the responsibilities are not lessened after enrolment. The pressure to provide for families and concentrate on coursework overwhelms some students often laden with a disproportionate burden of household task and caregiver responsibilities when enrolled in university (Carney-Crompton & Tan, 2002).

Managing multiple roles is a source of stress for female students and parents feel guilty about being unavailable when their children need them, with mothers of children under thirteen reporting the most conflict (Terrel, 1990). Women with older children may persist to graduation; where as those with younger children may interrupt their education to fulfill family responsibilities (Carney-Crompton & Tan, 2002; Home, 1998). Unsuccessfully managed stress factors may result in premature withdrawal from school (Scott, Burns & Cooney, 1996). Work schedules and family responsibilities prevent most adult student from attending college full time.

Other researchers suggest that conflict management might always be a problem for married female students because the institution of marriage is inherently constraining for women. In his study, Feldman (1973) tried to control for factors that he believed could contribute to role strain such as work and children by comparing married students and their divorced counterparts. He found that although they had similar non-academic obligation divorced women were still more academically successful as graduate students. Although this study was in 1973, it is interesting because it raises the question that perhaps there might be something endemic to the institution of marriage that makes it an academic liability for these women within it. No doubt, combining work commitment, family responsibilities, and school obligations may be very complex and tasking. Ultimately, the struggling and juggling inherent in this may create tension and health - related problems for the individuals' concerned (Ross, Neibling, & Heckert, 1999). When nontraditional female students find time to do schoolwork, they often do not have a quiet, private space in which to do so. Finding adequate time to do homework without interruption was identified as a major challenge student, with family responsibilities, face (Aronson, 1998). The above readings and researches have been utilized to substantiate the sub problems of this investigation relative to the challenges and motivations of female married undergraduate students in the English Department of Messalata.

Design and Methodology

The descriptive survey method was utilized in this investigation. The researcher nominates to employ this method as it is the most suitable method by which they could elicit data from the 24 respondents in the English Department.

From the survey, the researcher believes that they could accumulate substantial and primary data from which their answers to the sub problems would emanate. These opinions and choices of the respondents are paramount to proving the validity of their sub problem areas relative to the challenges and motivations of female undergraduate students in the English

Department of the College of Arts and Sciences, Messalata.

Population of the Study

Initially, the researcher is able to identify their prospective respondents by their attire befitting married Libyan women i.e. the traditional black outfit and veil over the face. After assessing their civil status from their appearance, they had to interview these ladies since not all those wearing such outfits are married; others may just be engaged. After further inquiries about their civil status, the researchers finally came up with a total of 30 students with the following: First year - 3; Second year - 4; Third year - 3 and Fourth year 20: a total of 30 married students. Nonetheless, when the questionnaires are piloted after a week of identifying them, only 24 are available to answer the questionnaires for the survey so the researchers had only the 24 respondents.

The Questionnaire.

A questionnaire which was the main instrument in this study contained questions which were derived from other studies that the researchers looked into and a few questions from them.

The above instrument is divided into two parts. The first portion contains a letter to the respondents informing them of the title of the research for which the survey is being conducted.

The second part consists of questions on the sub problems namely the challenges and the motivations.

The first sub problem on challenges had 7 questions relative to the family; 7 relative to the college and 3 relative to society.

The second sub problem enumerated 7 possible reasons for these respondents who are seeking to finish a degree.

The respondents are required to rank/rate in the order of their perception which among the given choices were the obstacles/reasons they felt were most significant to them with 1 signifying the most challenging/ primary motivation while 7 or 3 as the least difficult or last reason for the choice.

Analysis of Findings

This section contains data from the survey conducts relative to the following sub problems:

1. What are the challenges or difficulties that these students encounter while studying?
2. What are the motivations of these married students in their desire to continue their studies and finish a degree?

Married students experience problems with role overload, time management, isolation from fellow students and faculty, and decreased marital communication, sexual gratification, and leisure time...and guilt over "abandoning" children, and conflict about societal expectations of the good spouse/mother (Gall, 1996).

In her book entitled "Juggling," Crosby (1991) describes how a working mother experiences great conflict and guilt in her attempts at being superwoman. Indeed, when both employee and wife are statuses that women are expected to achieve and value, such feelings are bound to exist. Crosby (1991) asked her respondents if they felt that being a woman affected how they balanced their careers and private lives compared to most men doing comparable work. Three-quarters of them answered yes and explained that they were always tired and felt as if they were unable to put forth enough effort to excel or even do well at anything.

Challenges Encountered Relative to the Family

In Table 1, the 24 respondents ranked the difficulties they face as married undergraduate students. From the table, one can see that among the seven areas given for choices, the respondents revealed that "spending less time with their husbands" posed the most challenges. This was rated as the primary difficulty to / and in their studies. This was followed by "

Table 1
Challenges Encountered in the Family.

Challenges	Frequency	Percentage	Rank
1. Spending less quality time with my children.	5	20.83%	3
2. Spending less time with relatives and sharing the social life.	1	4.16%	6
3. Spending less quality time with my husband.	7	29.16%	1
4. Difficulty meeting family and study commitments.	2	8.33%	5
5. My extended family members do not offer support.	6	25.00%	2
6. Too much chores in the household	3	12.50%	4
7. No available family member to bring me to the college.	0	0%	7
TOTAL	24	99.98%	28

no support from their family members", spending less time with the children", "too many chores in the household", "difficulty meeting family and study commitments", "spending less time with relatives" as the second, third, fourth, fifth and sixth difficulty in that order. No one indicated that "no available family to bring me to the college" was a problem.

The data in Table 1 indicates that one third of these married Libyan women recognize that their prime role as wife is of paramount concern. Spending early hours away from their homes/houses in order to attend their daily morning lectures can truly be a source of concern, given that they are Muslim women. Being fully aware of their duties the moment they have entered this state of life, students are deeply bothered by being away from their family particularly their husbands.

This is the initial anxiety these respondents noted because they have been made fully aware of their duties as wives, prior to their marriage.

En.islamtoday.net. enumerates the wife's duties to her husband as follows: obedience: not to leave the house unless the husband permits; to refrain from fasting voluntarily unless she has permission; not to let anyone into the house unless he permits it; to guard his property a too serve and to run the house in a reasonable fashion. Being aware of these responsibilities as a wife somehow makes majority of these respondents feel that it is the most challenging hurdle. These respondents believe that a wife needs to dutifully do all these aforementioned obligations.

Another survey conducted by Zain in 1991 did not explicitly state that the wife should devote fulltime attention and service to her husband. Nonetheless, the survey stated that in most Muslim countries, 20 out of the 23 areas revealed that half of the wives agree to obey and give priority to their husbands. This is true to the Muslim wives in South Asia and Southeast Asia. The same results were seen in the survey in the Middle East, North Africa and across Central Asia. In Europe, 9 out of 10 wives hold this view of obeying and prioritizing the husband. "My extended family members (including husband)" do not offer support" was ranked as the second factor causing difficulty to these married undergraduates and almost one fourth of the respondents claimed it to be so.

The Libyan setting depicts the family as closely knit where married children, particularly the males, construct their houses beside their parents' homes if not have an additional structure in the same building. Such being the case, these married students at times mingle with their in-laws who may not be supportive of the idea that women should leave their homes when they

are married. This could interfere with the students' desires to pursue an education since altercations regarding leaving the home might ensue. Hence, these respondents are constrained from attending lectures regularly for fear that this might cause family disagreements.

According to Western Journal of Medicine (2000) the traditional Muslim family is extended, often spanning 3 or more generations. An extended structure offers many advantages, including stability, coherence, and physical and psychological support, particularly in times of need. traditional Muslim family is extended, often spanning 3 or more generations. An extended structure offers many advantages, including stability, coherence, and physical and psychological support, particularly in times of need.

In Muslim culture, akin to other traditional cultures, respect and esteem increase with age. Elderly parents are respected on account of their life experiences and their hierarchic position within the family unit. The opportunity to attend to the needs of one's parents in their later years is viewed as a gift from Allah.

In practice, it is usual for a new bride to move into the household of her husband. The change is often considerable, and problems in the fledgling relationship between the bride and her in-laws are common. This transition is all the more difficult where these newly married women are students like the respondents in this study. "Spending less time with children" was rated as the third root cause for difficult in completing a degree since twenty percent of the respondents believed it to be so.

Regardless of culture, a child is the bond between a husband and a wife. A child's role in the family is to love and to be loved since they complete a family. The child's needs to be raised by loving parents into an adult with a bright future is the primordial duty of parents.

The respondents are in full recognition of the above statements. They ascertain that they have a great responsibility to their children by way of their physical presence. Some of the respondents have children who are infants, others have toddlers and they expressed their ardent desire to be with them throughout the day; yet their desire to complete their studies have compelled them to seek the assistance of their mothers or mothers-in-law.

In the internet article on Roles of Parents and Children by Christine Huda Dodge, she explained that Muslim children learn early on that each person has his or her duties and responsibilities.

It is the children's responsibility to listen to and obey their parents, recognizing their experience and wisdom. On the other hand, it is expected that Muslim children treat their parents with kindness and respect their authority. Muslim parents are not loose disciplinarians, but they are advised that children should be treated according to their nature and in accordance with their level of understanding.

Muslim parents, in turn, have a responsibility to care for their children physically and emotionally. Parents provide support, guidance, and structure in a child's life. It is worth noting the origin of the word "discipline" in English. Stemming from the word "disciple," it means a follower, or a devoted learner. An equivalent word in Arabic would be tarbiyyah, which means "cultivation" or "growth." The goal for Muslim parents, as indeed for most parents, is to cultivate to grow into self disciplined, independent people one day.

Being Muslim mothers then, inadequate time with the child somehow gives them a feeling of guilt

The fourth area of concern for the respondents is "too many chores in the household".

To the respondents, the family is central to their existence i.e. the husband and the children they have. Nonetheless as mentioned earlier, they have to "juggle" between the wife- mother role and in addition - the student role. Doing so amidst school as well as house chores causes them anxiety in their schooling. It is noteworthy at this point that only twelve percent (3 respondents) out of the 24 the married students stated that they are saddled with this problem. On account of this, the researchers believe that the 21 other respondents have readily accepted the fact that upon entering this married state of life, these married students are

resigned to the reality that they ought to be ready to handle multiple responsibilities. Perhaps, those who did not consider this area as a barrier in/to their studies have either learned to manage their time, have no children at this point or have other means to finish the house work like perhaps a relative or another family member.

An internet website, *www.al-islam.org*. dealing with "Principles of Marriage and Family Ethics", corroborates the preparedness of Muslim wives to favorably conform to the roles of a wife in the family. The researchers are convinced that the following excerpts have made the area on "too many household chores" NOT as a burden to majority of the respondents.

The remaining difficulties that have been regarded as least burdensome are "difficulty meeting family and study commitments" and "spending less time with relatives and sharing the social life". Once more, summing up the two areas revealed that these difficulties are not significant as sources of concern. This is based on the belief that the family is nuclear with the father, the mother and child/children comprising it.

Although family ties in Muslim countries particularly in Libya, are extended to second and third generations (Western Journal of Medicine,2000), these difficulties hardly bothered a few respondents.

Lastly, noticeable from Table 1 is that not one among the 24 respondents rated "No available family member to bring me to the college" as a challenging area. This goes to prove the fact that Muslim families - both nuclear or extended, willingly assist their family members in any situation where their support is needed.

The researchers and even the respondents confirm that if their family members (husband, father, brother, relative) are not available, they charter a "bus" together with other students from the place. To the bus driver, they pay a certain sum of money for the duration of one month.

Challenges Encountered Relative to the College

Table 2 presents the difficulties faced by the 24 respondents in the English Department.

Their challenges in the college are presented in the order of their difficulty from their point of view i.e. from the most challenging area/difficulty to the least area of difficulty. They are as follow: the foremost concern is the "presence of stringent college policies "followed by " the college is too overcrowded"; "lack of qualified counselors to help with student issues" as the third area to hurdle with; "too many courses and assignment";

Table 2

Challenges Encountered in the College.

Challenges	Frequency	Percentage	Rank
1. Too many courses and assignments per semester and inflexible deadlines.	3	12.5%	4
2. Lack of facilities on camps:(e.g. child care nursery, lounge, study area)	1	4.16%	6
3. College Policies: strict attendance, too many subject matter. Difficult time table, maternity leave)	7	29.16%	1
4. Lack of qualified counselors to help with student issues.	5	20.83%	2
5. Learning in a foreign language poses problems.	2	8.33%	5
6. College faculty are inconsiderate regarding family situations and conditions.	2	8.33%	5
7. The college is too overcrowded and not conducive to learning.	4	16.66%	3
TOTAL	24	99.97%	26

college faculty are inconsiderate"; "Learning in a foreign language poses a facilities on campus" as the fourth, fifth and sixth and seventh challenges.

As earlier mentioned, for these married students, attending lectures in the early hours and leaving behind their responsibilities as wives and mothers poses the first problematic area to these students. On account of being married, their responsibilities to their family come as a priority at the expense of their regular attendance in lectures. As a result, they would rather stay away from regular lectures than leave their duties to their families.

In short, the same percentage of respondents bothered by neglect of performing one's responsibilities towards the husband is the same percentage worried over college policies, in particular, regular attendance at lectures. They are aware that their presence during lectures is part of their marks; nonetheless, many times, they are willing to forego of these and just go to the college when examination days are scheduled.

The married researchers themselves meet this difficulty since one of them has a three month old baby to this date. In the course of the discussion, she mentioned that living in Tripoli makes it impossible to be regular with her attendance. If she needs to come, she brings along her baby and leaves her child in her mother's house somewhere near the college. Another member is pregnant and likewise finds it difficult to be sitting for long hours (3 lectures in a day. Hence, attendance is truly a predicament to them. They believe that family, especially children, needed to come first, and their student obligations were met only after all other responsibilities were completed.

As a mother I am trying my best. As a wife I feel guilty because I had to ignore husband most of the time, but I believe if the husband is supporting and understanding there will be no problems. I also feel guilty for my son who is in KGd and needs my support (International Journal of Education and Research Vol. 2 No. 1 January 2014).

The above statement was quoted from one Emirati married student when she was interviewed regarding her multiple roles. This and varied sources affirm the conflicting roles these respondents meet.

Besides long hours of lectures, too many subjects and subject matter was a source of concern for the respondents. In the aforementioned statements, the respondents' priority was their families which explains their frequent absences in and from lectures.

Given that they are on maternity leave, their month long leave or more days out of the college poses another challenge with regard to lecture sheets and subject matter. Following the birth of a child, students are allowed two weeks maternity leave and this was considered too short.

Belonging to a department that has limited rooms for lectures posed a second difficulty to the respondents. Thus, "the college is too overcrowded and not conducive to learning" was regarded as the second source of difficulty"

One fourth of the respondents and so are the researcher convinced that a good classroom atmosphere and a pleasant environment contribute to better learning.

A study conducted by Parveen Khan and Mohammad Iqbal Sarhad of Pakistan (2012) revealed that effective teaching and learning was not possible in overcrowded classes and majority of the teachers were facing instructional, discipline, physical and evaluation problems. In order to solve these problems some implementable measures were made which suggested that government should make strict rules and policies regarding optimum students in classrooms and provide sufficient budget to education department for providing better facilities in schools.

Due to inevitable circumstances brought about by conditions in Libya, the College of Arts and Sciences had to relocate in a bigger campus at Shafeen starting Academic year 2014-2015. Because of delayed structural works of the buildings, the English Department was compelled to temporarily hold classes in a limited number of rooms while waiting for the completion of other rooms and buildings.

The school's physical plant has been so confined to a few rooms where lectures are conducted for the students of the English department. This "overcrowding" has affected the respondents in a way since perhaps they would prefer better facilities and services from their college.

"Lack of qualified counselors to help them" was rated fourth and twenty percent of the respondents admitted that they hope to have qualified counselors.

This is one of the Student Services that is not offered in their College. Perhaps these respondents need some advice from other individuals aside from their family, particularly in matters concerning the college or other college related obstacles. At times, they might have wanted to consult with counselors to solve their personal issues but could not find one.

In a study on "Perspectives of Emirati Married Students" 20.83% strongly agreed they needed qualified counselors to assist them solve issues of regarding marital problems and the like. The study cited that there are the college staff who are capable of understanding the home circumstances and family obligations of the married students or offer counseling services. Hiring competent counselors who understand the culture is essential for the provision of appropriate counseling services to all students and specifically when dealing with issues related to married students.

Along with "too many subjects course requirements and assignments per semester and inflexible deadlines", twelve percent of the respondents rated this as the fourth challenging/difficult factor during their stay in college.

Due to their conflicting and multiple roles, they are left with no choice but to set aside school requirements and prioritize family obligations. The number of subjects they have, particularly the respondents with children, is taking too much time from their family time.

This has been confirmed by Carney-Crompton & Tan (2002). Married students and those responsible for the care of children have family responsibilities before enrolling in higher institution and the responsibilities are not lessened after enrolment. The pressure to provide for families and concentrate on coursework overwhelms some students often laden with a disproportionate burden of household task and caregiver responsibilities when enrolled in university.

Two respondents claimed that "College Faculty are inconsiderate regarding family situations" and this was ranked as the sixth difficulty.

Perhaps these respondents were hopeful that their teachers would extend to them "more consideration" than the rest of the students on account of their status and responsibilities in life.

However, the researchers believe that these respondents should have realized from the start what they were getting into i.e. having not only multiple roles but at times conflicting roles. The respondents should know which they ought to prioritize and should not expect extra attention from the teachers.

The respondents were least bothered by lack of facilities like child care nursery, lounge, study area. This is because the respondents with children leave their children with family members.

"Learning in a foreign language poses problems" was considered by two respondents as difficult. The researchers believe that there are students in the English Department who are not as skilled or knowledgeable of the English language like most students in the Department. Perhaps these 2 respondents are but a few of those who wish to complete their certificate despite inadequate English skills.

Challenges Encountered Relative to Society and Culture

Table 3 discloses the difficulties met by the female married undergraduate students in the English Department with regard to society and culture.

The Table reveals that their choice of employment in terms of location is limited to working in close proximity to one's home.

Thirty-seven percent (37%) or more than one third of these respondents believe that after having had a certificate or having earned a degree, they could seek employment not only in their community but probably some place where they could develop both professionally and

socially. Nonetheless, the society and culture these respondents have grown into uphold the women's role in the home as wives and mothers more than as employed individuals. Moreover, these female married students are bound by their cultural practices and laws.

As stated in *www.al-islam.org*.

"Men are the maintainers of women, because Allah has made some of them to excel others..." (4:34).

Therefore, men have a greater and more difficult responsibility in supporting their families. It is the man who can, through his wisdom, support his family and prepare the grounds for their happiness and it is he who can turn the house into a paradise and his wife to act as an angel.

"My employment opportunities are limited to a female only school environment" is the second area these respondents are anxious about.

The above data implies the anxiety of the respondents of ending up in a workplace only for the female. Perhaps these respondents desire to be in workplace where both genders are students.

According to data gathered from *www.islamweb.net.*, there is an immense and growing need for Muslim women in various medical fields, in education, in helping professions such as social work, counseling, psychology, psychiatry, and childcare. With the growth of technology and communications capabilities, there are unlimited opportunities for women to do some type of work or business from home (such as secretarial and typing; writing, editing, publishing; computer work, etc.). This would be an ideal situation that would eliminate many of the concerns that may arise for working women. These respondents might be aspiring to get into other jobs beside teaching.

The third problem area relative to culture is that "the family identifies me as a married person first and student second."

The previous data in the earlier tables attest to the fact that in the Islamic culture, the woman's role is generally for the family - as a wife and mother; balance her household and maternity responsibilities with work. This is even truer in cases where they work only because they have to, or have a job / occupation that they do derive fulfillment from. (*slamqa.info/en/106815*)

The respondents cannot freely work even after their studies since they still have to prioritize their families.

The aforementioned data all point to a reality that the female undergraduate married students do encounter difficulties of diverse nature. In all of these, they need to juggle between the wife-mother role in addition to the student role.

Table 3
Challenges Encountered in the Society and Culture.

Challenges	Frequency	Percentage	Rank
1. My choice of employment in terms of location is limited to working in close proximity to my home.	9	37.5%	1
2. Family identifies me as a married person first and student second.	7	29.16%	3
3. My employment opportunities are limited to a female only school environment.	8	33.33%	2
TOTAL	24	99.54%	6

MOTIVATIONS IN PURSUING A DEGREE

Female married students have significantly ranked their reasons for wanting to complete higher education.

Table 4 depicts that a great number of them chose "To be an active member in society and to honor my country" as their paramount reason for this aspiration. Following to be in a workplace where both genders are students. this is "Increase my self-confidence" where one fourth of them agreed to wanting more self-esteem.

Table 4
Motivations in Pursuing a Degree.

Challenges	Frequency	Percentage	Rank
1. To be an educated parent.	1	4.16%	5
2. Add to my knowledge and experience.	4	16.66%	2
3. To be an active member in society and honor my country.	7	29.16%	1
4. Increase my self confidence.	4	16.66%	2
5. Teaching is a desirable occupation for women in my culture.	3	12.5%	3
6. Improve my financial situation..	3	12.5%	3
7. Peer encouragement.	2	8.33%	4
TOTAL	24	99.97%	20

"Add to my knowledge "ranked third while 'teaching is a desirable occupation for women in my culture" and "Improve my financial situation" were rated on equal percentages.

"To be an educated parent" and "peer encouragement" were the least motivations to finish their degree.

Assessing the given situation that these Libyan female respondents are into at this point in time of the country's political crisis, the researchers surmise that finishing a degree will add to the prestige of their country. After finishing their degree, these respondents are aware that this will add to the statistics on the state of literacy in their country.

In fact, in the 2010 Statistics from *www. Wikipedia*, Libya had a literacy rate of 94. 2% with the Male at 98.6 % while the Females at 90.7%. This figures speak very well of the country's educational thrust which this respondents perhaps desire to be a part of.

Being degree holders will make them become a/the pride not only of their family as well as their country particularly during these times. In addition to this, perhaps these respondents would like to change the notion of other people about Libyan women which is their being only for the home/house.

Lastly, completing their studies and landing a job as educators will give them a chance to teach the younger generation to become good citizens and bring Libya to a better place in the world.

"To increase my self confidence" was rated as second. It is a fact that these respondents are individuals who know their worth. They recognize the truth that even if they are married, they need to complete a degree which perhaps they can be proud of. they can set themselves as a role model to their children in regard to the benefits of earning a degree. The researchers believe that these respondents are open minded when it comes to being educated. These respondents are but a part of the growing number of women who are starting to open their doors to change and one of this is being educated to increase one's self confidence.

In a study conducted by UPCEA (*www. Setonhill*) they established that those earning a credential feel significantly more secure in their career and future when compared to individuals in the benchmark group. They likewise feel more secure in their current jobs,

although to a lesser extent than benchmark respondents. All participants reported being effective in their current jobs. Over 80% of degree or certificate holders report increased self-confidence as well as family and friends being proud of their educational accomplishment. Although those in the benchmark category do not have bachelor's degrees, they attach a much higher importance to a degree resulting in career opportunities, financial security and self-confidence.

"Add to my knowledge and experience" was ranked third. These respondents as stated earlier are parts of the growing generation who are exposed to the changes going on in these times where men and women are afforded equal opportunities. Though they still consider themselves more importantly parts of the family than society in general, perhaps they affirm that acquiring and completing a degree will give them an edge over most others in this society.

"Teaching is a desirable occupation for women in my culture" and "Improve my financial situation" were rated on equal percentages

Teaching is one of the selected professions entered into by female graduates in this country. Female graduates could be nurses, doctors, pharmacists but among others, teaching has been the most pioneered career. On account of the cultural limitations on jobs that women are allowed to enter, these respondents perhaps are inspired to become teachers in the future.

An article in <http://muslimspice.com/women> revealed that Muslim scholars of classical times and contemporary times have explained that a woman has no need to go outside the home to earn a living. Her father, brother, grandfather, one's self confidence. husband, son are all there to provide for her. Career Muslim women will say Khadeejah bint Khuwaylid (RA) worked. In fact she hired men to work on her behalf. She was not out in the markets bartering and trading. Even speakers such as Yasir al-Qadhi have stated that women should not work except in a couple of professions such as teaching girls and gynecology. Muslim women marriage counselors have stated that a major cause of disruption in marriages is the inflexibility of the career wife. Men are advised to avoid career women who go out to corporate offices and intermingle with men in the course of their work. A woman loves home making, cooking, cleaning, and raising children not otherwise.

To be an educated parent" and "peer encouragement" were the least motivations to finish their degree.

The above are best elucidated by the prevalence of cultural roles of women i.e. being for the family; to be the wife and mother of the home. This explains why self development like being educated has been relegated and considered as the last motivation in pursuing a degree.

The above data on the challenges and motivations were all elicited from the 24 respondents who are presently undergraduate students at the College of Arts and Sciences from First year to Fourth year.

Summary, Conclusions and Recommendations

Summary

For most women, being married is never a hindrance to obtaining a degree. This driving force to fulfill one's aspiration despite conflicting roles of wives-mothers and students served as the impetus for this research to be undertaken.

For this reason, the researchers embarked into a study on "Exploring the Challenges and Motivations of Female Married Undergraduate Students in the English Department of Messalata".

Specifically, this research provides answers to the following questions:

1. What are the challenges or difficulties that these students encounter while studying?
2. What are the motivations of these married students in their desire to continue their studies and finish a degree?

The descriptive survey method is utilized in this investigation. The researcher opted to employ this method as it is the most suitable method by which they could elicit data from the 24 respondents in the English Department.

From the survey, the researcher believes that they could accumulate substantial and primary data from which their answer to the sub problems would emanate .These opinions and choices of the respondents are paramount to proving the validity of their sub problem areas relative to the challenges and motivations of female undergraduate students in the English Department of the College of Arts and Sciences, Messalata.

A questionnaire which is the main instrument in this study contains questions which are derived from other studies that the researcher looks into and a few from them.

The above instrument is divided into two parts: the first portion contained a letter to the respondents informing them of the title of the research for which the survey is being conducted: the second part consists of questions on the sub problems namely the challenges met in the family, the college and in society. Another set of questions were on the motivations in pursuing a degree.

The respondents are identified from the total of 30 students with the following: First year - 3; Second year - 4; Third year - 3 and Fourth year -20. Nonetheless, only 24 of them attended lectures regularly thus they served as the study's respondents.

Findings

1. The challenges encountered by these married students categorized into three areas are as follow:

1.1 In the family, they regarded "spending less time with my husband"; 'my extended family members do not offer support"; "spending less quality time with my children" as the first three areas of concern for them. "Too much chores in the household"; "difficulty meeting family and study commitments";"spending less time with relatives" and "no available member to bring me to college" were the fourth, fifth, sixth and seventh areas which posed difficulties to the respondents.

1.2 In the college, "presence of college policies like strict attendance, too many subject matter, difficult timetable, maternity leave"; "the college is too overcrowded and not conducive to learning" and "lack of qualified counselors" as the first three challenges these respondents had to contend with. "Too many courses and assignments per semester and inflexible deadline": "college faculty are inconsiderate" were the fourth and fifth difficulties. "Lack of facilities on campus i.e child care nursery, lounge, study area" together with "Learning in a foreign language pose problems" were rated as the least difficult.

1.3. In the society and culture, the respondents ranked "my choice of employment terms of location is limited in close proximity to my home" as the most challenging concern followed by "my employment opportunities are limited to a female only school environment" and the least difficult concern was "family identifies me as a married person first and student second."

2. Motivations for pursuing a degree revealed that the respondents wanted "to be an active member in society and honor my country" as the foremost reason for completing their studies. This was followed by "increase my self confidence" and "add to my knowledge "as third motivation in pursuing a degree. Following these motivations are "teaching is a desirable occupation for women in my culture" and " to improve my financial situation" as having the same rank from the respondents. The least reasons for the pursuit of a degree are "improve my financial situation" and " to be an educated parent".

Conclusions

The following conclusions are drawn based on the findings of the study:

1. Challenges are integral to any endeavor in one's desire to achieve higher education.

Coupled with this motivation to achieve /pursue a degree is one's determination and perseverance during this span of time.

2. A woman's civil status, i.e. being married, is not a hindrance to her pursuit of higher

education.

Recommendations

Relative to the sub problems on challenges encountered and motivations of these female married students, the following are suggested:

1. Since married students in this country have multiple roles, teachers can assist them in affording them more consideration for written evaluations/quizzes. The teachers can give equivalent tasks which these students would have missed out during regular lecture hours.
2. The college/department can likewise device some measures whereby these students could be alleviated in their academic performance like starting on line courses for them (if possible).
3. Student Services like a Guidance and Counseling Office can perhaps be established in the college not only for married students but for other students as well who might need outside help; aside from the help and advice that their family members can offer.
4. A research can be conducted relative to the preferences in courses/jobs of female married students in other Carnouniversities nearby Messalata. This study can gauge the level of feminism this generation of married women are into.

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Epidemiology of Hepatitis B and C Infection in Msallata city in reference to Age Groups and Genders.

(وبائية الاصابة بالتهاب الكبد بي وسي في مدينة امسلاتا حسب الفئات العمرية و الجنس)

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الملخص:

أهم أنواع التهاب الكبد الفيروسي هي فيروسات التهاب الكبد سي ودي و إي. أهداف البحث: التعرف على عدد الحالات المصابة في كل من فيروسات التهاب الكبد بي و/أو سي وغير المصابين من حيث الجنس. وحسب الفئات العمرية المصابة بفيروس التهاب الكبد بي أوسي. المواد وطرق الاختبار: أجريت الاختبارات باستخدام تقنية الاليزا. النتائج: أن أعلى عدد من الحالات المصابة كانت ذكورا، بنسبة 2.8% من إجمالي 392 عينة من الذكور. في حين أن الذكور يصابون أكثر من الإناث بنسبة 63.6% من إجمالي عدد الحالات المصابة بفيروس التهاب الكبد بي. أن العدد الأعلى من الحالات المصابة كانت بفيروس التهاب الكبد الوبائي سي. في حين كان الذكور يصابون أكثر من الإناث بنسبة 85.7% من إجمالي عدد الحالات المصابة فايروس التهاب الكبد الوبائي سي. ولاحظت الفئات العمرية للعينات الفئة العمرية الأعلى المصاب بفيروس التهاب الكبد الوبائي بي حيث كان الفئة العمرية 35-45 سنة أي 7 من الحالات المصابة من إجمالي 14 حالة مصابة، أي بالضبط 50% من الحالات المصابة. الكلمات المفتاحية، التهاب الكبد ب، التهاب الكبد ج، الجنس، العمر.

Abstract

The most important of viral hepatitis are hepatitis C, D, and E viruses.

The aims of the research, to understand number of infected cases with both hepatitis B and/or C viruses and non-infected in terms of genders. also, detected more age infected people groups, and the hepatitis B or C virus infected for both genders.

Materials and methods, the tests were carried out using ELISA technique.

Results, the higher number of infected cases was males with 2.8 % from 392 samples of males. The higher number of cases was infected with B virus. Whereas, males infected more than females with 63.6% of total number of cases infected by hepatitis B virus. Also, the higher number of cases was infected with hepatitis C virus. Whereas, males infected more than females with 85.7% of total number of cases infected by hepatitis C virus. The age groups of the samples observed the higher age group infected with hepatitis B virus which was 35-45 years, which was 7 infected cases of total 14 cases infected, exactly 50% of infected cases.

Key words, hepatitis B, hepatitis C, gender, age.

INTRODUCTION

The liver is the most important organ of metabolism (metabolism) in the human body, and it is located to the right of the upper abdomen, and everything that can be received from the intestines into the blood is transported to the liver, and there the absorbed parts of the food are converted or stored, so that they are placed at the disposal of the organs Others, the liver has many functions that it performs in the human

body [1]. The liver weighs about 1.44-1.66 kilograms, and it is distinguished by its brownish color. It is located above the stomach to the left part and below the lungs. The liver is the largest organ in the human body after the skin.

The liver has many functions that cannot be itemized in this article, and among them protein metabolism, filtering and purifying the blood, enhancing the functioning of the immune system, production of albumins (It is the main protein found in the blood). Moreover, manufacture of the hormone angiotensinogen, which raises blood pressure by narrowing blood vessels [2].

Problem of study

There are many viral diseases that affect humans, including Hepatitis, which has been known since ancient times and was mentioned in the books of the Greeks and Romans since the nineteenth century BC. Most of the facts related to it were known after a series of from studies and research; viruses were referred to as a major cause of disease, with the beginning of the twentieth century and the identification of hepatitis A and B viruses [1], [2].

The continuation of research during the last three decades of the last century, a number of other viruses that cause viral hepatitis were identified, the most important of which are hepatitis C, D, E, viruses. These viruses, hepatitis A and E viruses, are transmitted by contaminated water and food through the mouth (Oral-Fecal-Route), while the transmission of hepatitis B, C, D, viruses is through contaminated blood and its derivatives and contact blood had borne (Infection) [3], [4], [5].

Hepatitis C is considered one of the most severe and dangerous modern diseases, especially types B and C, which pose a threat to human health and life, as in many cases people do not do a periodic analysis only after they show some symptoms such as fever, fatigue, lack of appetite, nausea, vomiting, abdominal pain, dark urine, pale stools, joint pain, jaundice (yellowing of the skin and the whites of the eyes) and a small subset of people with acute hepatitis can develop acute liver failure that may cause death, and sometimes the disease is detected by chance, through what some patients do of doing analyzes for other purposes, such as making health certificates for the purpose of work or marriage, but they are surprised that they suffer from the disease [2].

Since viral hepatitis can cause harmful consequences for health, prevention and early detection are humiliating. Information about the various forms of viral hepatitis, prevention measures and examinations, as well as treatment and support. Various infectious organisms attack many parts of the body. The liver is infected with them during hepatitis. Viral hepatitis spreads mostly from person to person or Through contaminated foodstuffs, and hepatitis viruses spread widely and varied in many regions of the world, therefore, it is important to estimate the personal risk to you, and to take your origin and special

names into account as well, and we would like through this booklet to give you valuable instructions and how you can protect yourselves From infection with hepatitis viruses, which can be done in the case of disease [6].

There are some people who do not show any symptoms during the initial infection of the disease, and others appear to have a rapid development of the symptoms of the disease, and they include (vomiting, yellowing, fatigue, dark urine and abdominal pain), these symptoms often last a few weeks and rarely What primary infection causes death [7], [8].

Symptoms may take from 30 to 80 days, and people who contract the disease at birth have a 90% chance of contracting the disease, while less than 10% of those infected appear after the age of five [6].

Acute infection with hepatitis B and C viruses is closely related to the severity of viral hepatitis, and it has been noted that skin itching may be an indicator of one of the possible symptoms of all types of viral hepatitis, and the disease continues in patients for a few weeks and then develops gradually In the most affected people, chronic infection with hepatitis B and C viruses may be asymptomatic or associated with chronic inflammation of the liver leading to cirrhosis of the liver over several years. This type of infection increases the likelihood of Infection with liver cancer, and a close relationship has been reached between hepatitis B and C viruses and membranous glomerulonephritis [9], [10].

Hence, the importance of this scientific research which studies the prevalence of hepatitis B and C among the visitors to the reference laboratory, Msallata.

The Aim of the Study

To knowing number of infected cases with both hepatitis B and/or C viruses and non-infected cases in terms of genders and numbers.

To determining number of cases infected with both hepatitis B and C virus for both genders.

To detected age groups of infected people, and the hepatitis B or C virus infected for both genders.

MATERIALS AND METHODS

Sample collection

The study included patients who attended the reference laboratory,

Location

Msallata city (Msallata is a city in the north-western part of Libya, in the Murqub District)

Period

The period is ten months (from the beginning of January to October of the year 2022).

Sample size

Sample size was determined by tested exactly 1197 cases..

Target ages

15-81 years and more

Target gender

Both Genders male and female

Samples type

The samples were blood drawn from patients

Tests type

The blood samples were conducted to detect the surface antigen of hepatitis B virus (HBs (Hg) and antibodies to hepatitis C virus (both antibodies IgG and IgM) on the patients' samples to find out the infection rate among patients as a comparative category.

Method

The tests were carried out using the Techniques ELISA technique, according to the Sandwich principle, and the use of hepatitis reactions and solutions (Biorex diagnostics), especially to detect the surface antigen of the hepatitis B virus (Biorex HBs Ag) and antibody to hepatitis C virus (Biorex Anti HCV).

RESULTS

Exactly, 1197 samples were collected randomly both genders (males and females) from different age groups to detect the presence of hepatitis B and/or C viruses for patients attending the retrospective laboratory, Msllata city in Libyan country, during the time period from January to October 2022, for exactly ten months.

Table (1) Number of infected cases with both hepatitis B and/or C viruses and non-infected cases in terms of genders and numbers

Gender	Not Infected	Infected	Total number
Males	381 (97.1%)	11 (2.8%)	392
Females	798 (98.0%)	7 (0.87%)	805
Total	1179 (98.4%)	18 (1.5%)	1197

Table number one showed the higher number of infected cases was males with 2.8 % from 392 samples of males.

Table (2) Number of cases infected with both hepatitis B and C virus for both genders

Gender	Type of virus		Total number
	B virus	C virus	
Males	7 (63.6%)	4 (36.3%)	11
Females	6 (85.7%)	1 (14.2)	7
Total	13 (72.2)	5 (27.7)	18

Table number two showed the higher number of cases was infected with B virus. Although, males were more infected than females with 63.6% of total number of cases infected by hepatitis B virus. Also, the higher number of cases was infected with C virus. However, males infected more than females with 85.7% of total number of cases infected by hepatitis C virus.

Table (3) the age groups of the samples that were detected, the number of infected people, and the hepatitis B or C virus infected for both genders

Age group in years	Number of sample	Infected / B virus	Infected / C virus
15-25	299	0	2
25-35	491	4	1
35-45	215	7	0
45-55	107	2	2
55-70	40	0	0
70-80	38	1	0
81-and above	7	0	0
Total	1197	13	5

Table number three showed the age groups of the samples. Which observed the higher age group infected with hepatitis B virus was 35-45 years, which was 7 infected cases of total 14 cases infected, exactly 50% of infected cases.

DISCUSSION

Hepatitis B virus (HBV) is the cause of widely spread infectious disease, especially in resource-limited countries. The extent of HBV infection was not sufficiently spoken [11].

In this study, the overall inflamed instances had been 18 instances of both varieties of hepatitis virus (B & C) out of whole cases 1197 below look at. But, it turned into found that the variety of instances infected with hepatitis B virus for sufferers attending the reference laboratory, Msallata city/ Libya of each genders (male and female) conversely the spreading of hepatitis virus (B & C) in Msallata city. However, more than the cases infected with hepatitis C virus, and that the number of cases varies according to gender. As the number of cases infected with B virus in males was about 11 cases out of 392 cases, with a percentage of 2.8%, and the number of cases infected with B virus in females is 7 cases out of 805 cases, with a percentage of 0.87%.

This study noted that, wide variety of infected cases the varies were according to age groups, where the most affected with hepatitis B virus age group was age group of (35-45) years, as the number of infected cases was eight cases out of total 18 infected cases, then observed by means of the age group of (25- 35) years, where the number of infected people was four cases out of 18 infected cases, as soon as age groups (15-25) and (45-55) have been same inside the number of infected people, which had been instances in each age group. Also, age groups (59 - 69) and (81- and above) did not find any infected case among them.

Seriously, inside the previous studies showed that the mean age of study participants was 44.2 years. Overall, 14 (3.6%) of them were positive for HBV [11] the result of this previous study is relatively different from this study. The explanation for that relatively different between this study and the previous studies, possibly because of weak immunity of people in this age group in this study compared to the previous study, which includes an older age group. In other study had done in USA reported that most cases occur among young adults, many of whom belong to high risk groups [12].

These results for Msallata area have get a consider an area of law endemicity for hepatitis B and C infection, the incidence of new cases, the prevalence of carriers, and the problem of acute and chronic disease place hepatitis B among the most important infectious diseases. The similar results in USA area [12]. In other previous study in Aden city of Yemen found that HBV was 1.5% of all cases under study. It was from 0% - 5.5% in infants to 4.6 - 40% in adults [13].

CONCLUSION

HBV and HCV still a public health problem in this community, this study concluded that

1. The percentage of infection varies according to gender, i.e. males were more infected than females.
2. The most age group affected was the age group 35-45 years.
3. The cases infected with hepatitis B virus were more than type C.

RECOMMENDATIONS

Because of HBV and HCV are still public health issues that need awareness and health education on the risky behaviours and transmission so do not share personal items with anyone, because they may be mixed with the blood of a person infected with the disease, such as (razors, toothbrushes and a home glucose meter) and others. This study recommended

- 1- Do not take illegal drugs, especially if you are saving them.
- 2- Not to perform tattoos or piercings in the body in places where they do not sterilize.
- 3- Not taking medical treatments or performing surgeries in places where they do not properly sterilize medical equipment and the place.
- 4- Avoid sharing and repeatedly using injection needles or any other tools used to inject medical substances such as hormones or any other substances.
- 5- Necessity, providing comprehensive services to reduce harm to drug users with contaminated injections.
- 6- Blood test during before blood donation to detect hepatitis B and C viruses.

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Some Biological Effects of Libyan Propolis extract on Male albino Rats Treated with Aluminum chloride

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المخلص

يعد استخدام المنتجات الطبيعية وسيلة أساسية للتوصل إلى عقاقير جديدة لاكتشاف وتطوير أدوية جديدة لعلاج الأمراض، أجريت هذه الدراسة لمعرفة التأثيرات الوقائية للبروبوليس (الصمغ) على الإجهاد التأكسدي الناجم عن الألومنيوم والتغيرات البيوكيميائية في الفئران. لذلك، أجريت التجربة الحالية لتحديد مدى فعالية البروبوليس في تخفيف سمية كلوريد الألومنيوم ($AlCl_3$) على المعايير الكيموحيوية لذكور فئران ويستار ألبينو. تم تقسيم أربعين من ذكور الفئران البيضاء البالغة إلى أربع مجموعات متساوية وتلقت العلاج لمدة 6 أسابيع، (GI): المجموعة الضابطة تلقت الماء المقطر، (GII): مجموعة البروبوليس 50 ملغم/كجم، (GIII): مجموعة كلوريد الألومنيوم 475 ملجم/كجم، (GIV): مجموعة البروبوليس وكلوريد الألومنيوم. أظهرت المجموعة المعالجة بـ $AlCl_3$ زيادة ملحوظة في نشاط انزيمي اسباريتيت تراناميناز (AST)، الالانين ترانس اميناز (ALT) والبيليروبين الكلي في البلازما، كما تم زيادة مستوى الكرياتينين واليوريا في البلازما بشكل ملحوظ بينما انخفض البروتين الكلي بشكل ملحوظ، كما أدت المعاملة بالبروبوليس مع $AlCl_3$ إلى تحسين التغيرات البيوكيميائية والنسجية الناجمة عن $AlCl_3$.
الكلمات المفتاحية: المنتجات الطبيعية، الصمغ، كلوريد الألومنيوم، الكبد.

ABSTRACT

The use of natural products is an essential way to new pharmaceutical leads for the discovery and development of new drugs to treat diseases. The present study was carried out to investigate the protective effects of propolis on aluminum-induced oxidative stress and biochemical alterations in rats. Therefore, the present experiment was undertaken to determine the effectiveness of propolis in alleviating the toxicity of aluminum chloride ($AlCl_3$) on biochemical parameters of male [Wistar Albino rats](#). Forty adult male albino rats were divided into four equal groups received treatment for 6 weeks: (GI) Control group received distilled water. (GII) Propolis group 50 mg/kg. (GIII) Aluminum chloride group 475mg/kg. (GIV) Propolis and aluminum chloride group. The $AlCl_3$ -treated group showed a significant increase in the activities of aspartate transaminase (AST), alanine transaminase (ALT) and total bilirubin in the plasma. Also, creatinine and urea, in the plasma were significantly increased while total protein was significantly decreased, propolis treatment with $AlCl_3$ improved the biochemical and histological changes induced by $AlCl_3$.

Keywords: Natural products, Propolis, Aluminum chloride, Liver.

Introduction

Humans and animals interact daily with their environment and are exposed to a wide range of chemicals and heavy metals, which can bio-accumulate in the body and collect in tissues with low excretion [1]. The third most abundant metallic element in Earth's crust is aluminum (Al) [2]. Avoiding exposure to Al is almost impossible as it is used in various daily applications, such as water treatments, wood preservation, shampoos, vitamins, food additives, packaging materials, antiperspirants, toothpaste, medicines, or as fillers in plastics [3]. Commonly, Al reaches humans by breathing ambient air and intaking contaminated food and water [4]. Aluminum distributes in varying human tissues including liver, lung, brain, heart, blood, kidney, bone and other organs, Humans are exposed to Aluminum Chloride that is present in food, drinking water, and soil [5]. The elemental aluminum does not occur in its pure state, rather it is always combined with other elements, such as chloride, silicate, sulfate, phosphate, and hydroxide. The wide distribution of this element ensures the potential for causing human exposure and harm [6]. The liver is the main organ responsible for processing toxic elements inside the body; therefore, it is involved in aluminum absorption and excretion through biliary flux [7]. The liver is a primary metabolic organ and is responsible for many critical functions within the body. Indeed, if the liver becomes diseased or injured, the ensuing threat to the body's metabolic system can be life threatening. Many researchers have previously demonstrated that antioxidants prevent hepatotoxicity by inhibiting lipid peroxidation, reactive oxygen species (ROS) generation, and also by suppressing the activities of aspartate aminotransferase (AST), alanine aminotransferase (ALT), and alkaline phosphatase (ALP) [8,9,10]. A natural product, propolis is a resinous hive product collected by honeybees from various plant sources. The use of propolis goes back to ancient times, at least to 300 BC, and it has been used as a medicine in local and popular medicine in many parts of the world, both internally and externally. In recent years, propolis has attracted researchers' interest because of its many beneficial biological effects, such as hepatoprotective, antitumor, antioxidative, antimicrobial, anti-inflammatory activity [11,12]. Besides, propolis-containing products have been intensely marketed by the pharmaceutical industry and health-food stores. The chemical composition of propolis depends on the specificity of the local flora at the site of collection. More than 300 constituents have been identified from propolis, among which phenolic compounds such as flavonoids, phenolic acids and phenolic acid esters have been reported as major constituents of propolis from the temperate zone [12]. Therefore, the present study was designed to assess the potential protective effects of propolis in modulating the harmful impacts induced by aluminum in male rats.

Materials and Methods

Chemicals

- Propolis was obtained from herbal markets, Libya.
- Aluminum chloride powder was purchased from El Gomhoreya Company, Egypt. Both chemicals dissolved in distilled water (10 mg Propolis, and 95 mg Aluminum chloride). Continuous shaking was done for complete dissolving. The solution was prepared fresh every day.

Animals

Forty male albino rats weighting 165-180 grams. The rats were purchased from Faculty of Pharmacy, Tripoli University, Libya. Rats were housed in plastic cages and received water and diet at good conditions for six weeks (experimental period). Animals were categorized randomly into four groups, ten rats in each group (n=10 rats).

Animal's groups

Group I (control): received 2ml distilled water by oral route and kept without any treatment for 6 weeks.

Group II (Propolis supplemented): rats received propolis at a dose of 50 mg/kg b.w/day[13]. Each rat received 1 ml distilled water containing 10 mg propolis by oral route for 6 weeks.

Group III (aluminum chloride treated): rats treated by aluminum chloride at dose of 475 mg/kg b.w[14], once daily, by oral gavage for 6 weeks. Each rat received 1 ml distilled water containing 95 mg aluminum chloride.

Group IV (Propolis and aluminum chloride): rats received both aluminum chloride and Propolis once daily, by oral gavage for 6 weeks. The doses were similar to that of the previous experimental groups.

Biochemical analysis

After 6 weeks of treatments, the animals of each group were scarified, and the collected blood was putted in a tube containing anticoagulant. It was centrifuged at 3000 rpm for 20 min to obtain plasma. The obtained plasma was stored frozen at -20°C until use. Alanine aminotransferase (ALT) and aspartate aminotransferase (AST) were determined as described by [15]. The estimation of total protein and total bilirubin were carried out by the method of [16]. Plasma urea, and creatinine concentrations were measured by the methods of [17], and [18], respectively.

Histological examination

After 6 weeks of treatments, the liver of different animal groups were prepared for histological examination through the routine technique according to the method of [19], and stained with couple stain haematoxylin (H) and eosin (E). The slides were examined and photographed as required.

Statistical analysis

Results were presented as means \pm SD. The student's t-test was used for comparison of different experimental animal groups and control ones, and the results were considered significant at $P \leq 0.05$.

Results

Table (1), shows that there are highly significant differences in the activity of ALT between groups ($P < 0.001$). Student t-test indicated that, a significant increase in activity ALT in AlCl_3 group, in comparing with that of normal group, In addition, the AST activity was no significant difference between groups .However, t-test shows a significant increase activity of AST in AlCl_3 group, compared with normal group. The activity of AST enzyme significantly decreased in AlCl_3 & Propolis group compared with the activity of AlCl_3 group, the level of total protein indicates an highly significant difference ($P < 0.001$) between groups. Student t-test analysis showed a significant decrease in the level of total protein in propolis group, AlCl_3 group and AlCl_3 & Propolis group compared with the levels of normal group. From table (1), it can be observed that, there is a significant difference between all groups as indicated by one-way ANOVA analysis ($P < 0.05$), the level of total bilirubin was highly significantly decreased ($P < 0.001$) in propolis group and AlCl_3 & Propolis group, compared with the level of normal group.

Table (1). Effects of treatments on some biochemical parameters in plasma of control and treated rats:

Parameters	G1	G2	G3	G4
ALT (U/ml)	39.90±0.64 ^{b*}	35.55±0.41 ^{a*b*}	61.30±0.25 ^{a*}	49.30±0.57 ^{a*b*}
AST (U/ml)	102.20±0.93 ^{b*}	110.20±1.76 ^{a*b*}	150.00±0.64 ^{a*}	132.00±1.11 ^{a*b*}
T-Protein (g/L)	6.35±0.43 ^{b*}	5.74±0.55 ^a	5.13±0.43 ^a	5.50±0.54 ^b
T-Bilirubin(mg/dl)	0.32±.04 ^b	0.21±0.01 ^{ab}	38±0.03 ^{a*}	0.27±0.08 ^{ab*}

Significance (a): relative to the control group. Significance (b): relative to the AlCl₃ chloride group Significance: P<0.05, highly significance (*): P<0.001.

Figure (1). showed statistical analysis; one-way ANOVA, of level creatinine there is a significant difference (P<0.05) between groups. Student t-test, indicated that, there is a high significant increase (P<0.001) in AlCl₃ group compared with the level of the normal group. In addition, that there is an high significant difference (P < 0.001) between groups as indicates by one-way ANOVA, student t-test of level of urea shows that there is a significant increase in AlCl₃ group, and AlCl₃ & Propolis group, compared with normal group. At the same time the level is significantly decreased in AlCl₃ & Propolis group compared with AlCl₃ group.

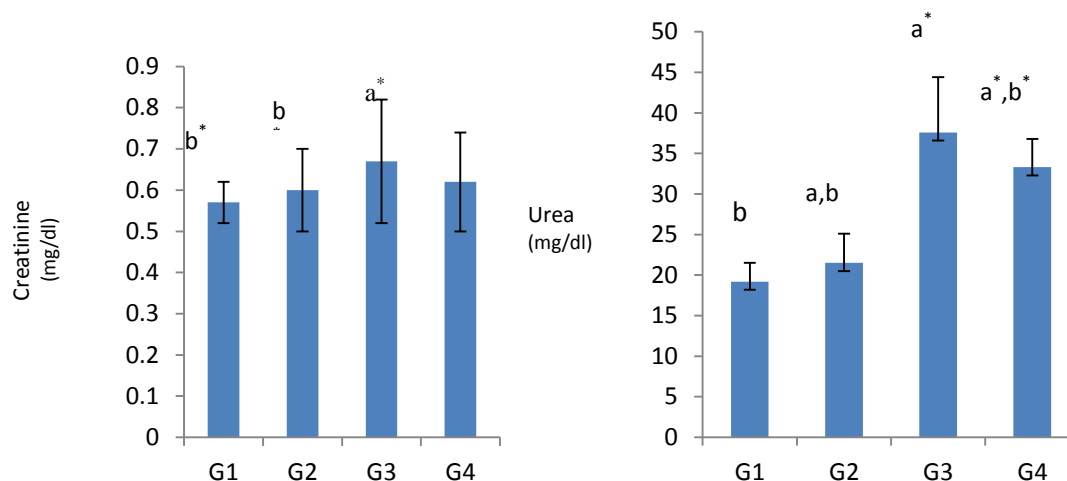


Figure (1). Effect of propolis on the plasma level of creatinine, and urea of rats treated with AlCl₃. Significance (a): relative to the control group. Significance (b): relative to the AlCl₃ group.

The histopathology of the liver tissues in normal group, propolis group (fig 2.A and B) showed normal hepatic structure with no histopathological changes. The histopathology of the liver tissues in AlCl₃ group (fig 2.C) showed wide spread inflammation, vascular congestion and dilated sinusoidal spaces. AlCl₃ & propolis group (fig 2.D) showed less necrosis and vacuolization compared with AlCl₃ group.

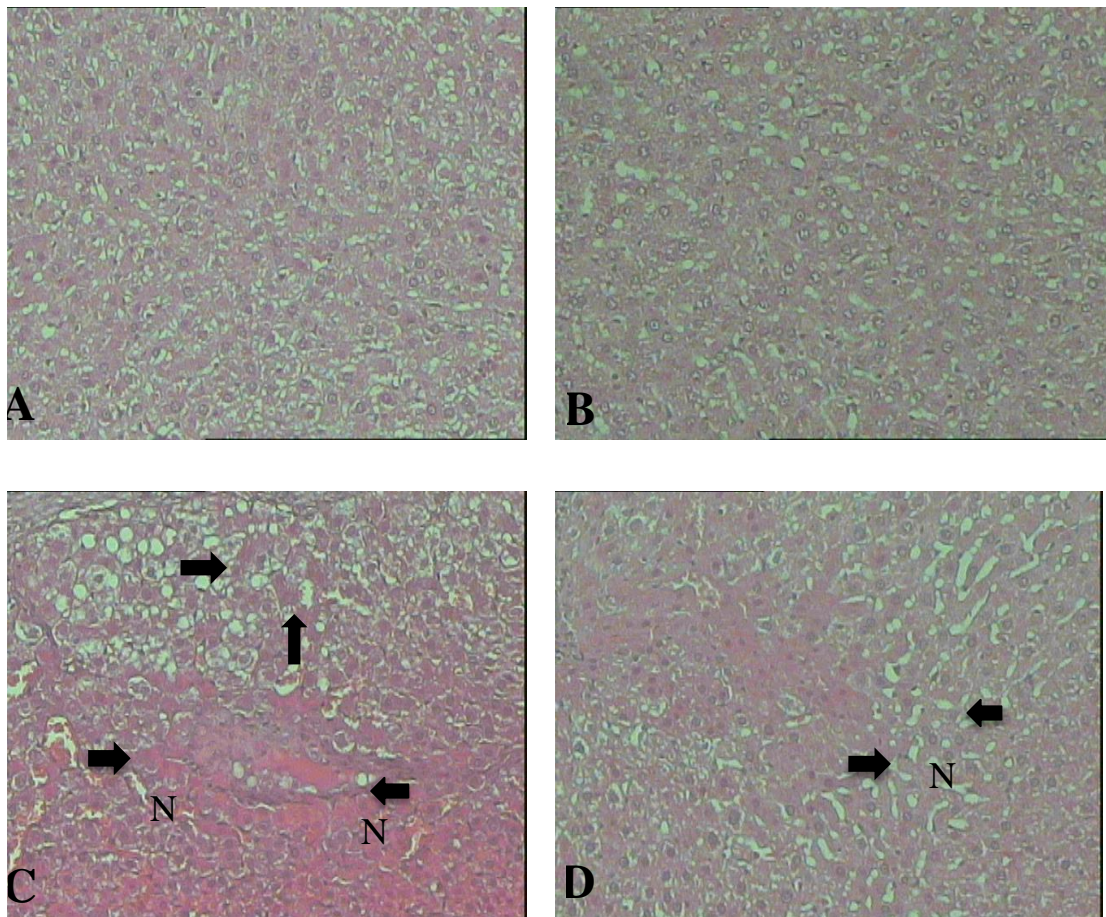


Figure (2). (A and B) showed normal liver with no pathological changes.(C) showed marked coagulative necrosis (N) with vacuolization (V). (D) showed less necrosis and vacuolization compared to (C) means more improvement.

Discussion

The present study was carried out to evaluate the protective role of propolis against aluminum toxicity induced biochemical and histological alterations in the liver and kidney of rats. However, it is well known that the plasma enzymes are hepatic health markers, and the alteration in their levels is an indicator of the disturbances in the histological structure of hepatocytes. In the present study, the $AlCl_3$ -treated group showed a highly significant increase in the plasma level of enzymes, ALT, and AST with marked detectable histopathological alternations in the liver tissues including severe vacillation with increased inflammatory infiltrated cells among the sinusoids and necrosis of cells. These results are in accordance with other findings showing that the increases in the levels of plasma enzymes are accompanied with histopathological changes in the liver tissue in $AlCl_3$ -treated animals[20,21,22,23]. ALT is an enzyme present in hepatocytes. Upon cell damaged the enzyme leaks into the blood. ALT level rises dramatically in acute liver damage, such as viral hepatitis or paracetamol overdose [24]. Serum concentration of bilirubin is very specific for potentially serious liver damage, and is an important indicator of the loss of liver function [25] . However, the elevated liver enzymes in the plasma after administration of $AlCl_3$ might be due to cellular degeneration and changes in permeability of hepatic cell membranes [26,27]. It had been reported that the accumulation of $AlCl_3$ in the liver tissue is associated with necrosis and degeneration of hepatic tissue to escape of liver enzymes from the injured cells to the plasma [23,28]. In addition, histological changes in the liver and the increase of plasma enzyme activities may be due to free radicals production and oxidative stress after $AlCl_3$ administration in the liver tissue[22,26] . On the other hand, the administration of

AlCl₃ combined with propolis showed non- significant change on the plasma level of enzymes, ALT and AST, with normal liver histological structure, indicating that propolis tended to prevent damage and blocked the enzymes leakage through cellular membranes. These results are in agreements with findings of many studies [20, 27,29], who concluded that propolis mostly recovered the action of AlCl₃ on the function and structure of the liver. Moreover, the hepatoprotective effect of propolis may be attributed directly to stabilization of redox state in the cells [30, 31].The total protein is made specifically by the liver. The TP levels will be depressed in hepatotoxic conditions due to defective protein biosynthesis in the liver. Restoring the normal levels of TP is an important parameter for liver recovery[32]. In the present study, there was a significant decrease in the level of total protein in AlCl₃ compared with normal group. However, the level of total protein was increased in propolis group, compared with AlCl₃ group. Urea and creatinine are waste products of protein metabolism that need to be excreted by the kidney, therefore marked increase in serum urea and creatinine, as noticed in this study, confirms an indication of functional damage to the kidney[33]. Urea level can be increased by many other factors such as dehydration, antidiuretic drugs and diet, whilst creatinine is, therefore, more specific to the kidney, since kidney damage is the only significant factor that increases serum creatinine level [34]. Therefore, significant increases in urea and creatinine levels noticed in this study are a classical sign that the kidney was adversely affected.

Conclusion

The present results demonstrated that the exposure of animals to aluminum is able to induce significant detectable changes in histological and biochemical characteristics and enzymatic activities. Also, our study showed that the propolis reduced the toxic effects of AlCl₃ by reducing degenerative changes in the liver and kidney tissues and alleviated biochemical parameters.

Recommendations

Recommended to reduce exposure to aluminum in our daily lives and it is also recommended that eating foods rich in propolis may be a useful way to avoid aluminum toxicity.

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