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Aim & Scope

Aims to enhance the level of published articles by improving integrity, morals and keeping papers in high professional standards to spread the good knowledge to all upcoming researches, scholars and scientists. So, the main objective of MECS is to advance the professionalism level of existed research, and to enhance the focus on new emerging trends.



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The legal Control of Electronic Payment Systems in Electronic Commerce Operations in Arab Countries

– A comparative Study –

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Abstract

The stability and growth of an economy is directly related to the strength, reliability, scalability and efficiency of payment systems. After the introduction of electronic payment methods and their wide spread acceptance in many developed countries, this technology has played an important role in stabilizing and growing their economies. But the use of electronic payment methods is still in infancy in Arab countries due to various incidents of frauds and identity thefts.

This research aimed to Identify the electronic payment methods and mechanisms, Identify the nature of banking supervision systems on electronic payment methods and their suitability for technical developments, Identify the challenges related to the e-banking environment, and to crystallize the concept of control of electronic payment methods in the framework of developing the performance of banking control units. To achieve this aims the researcher used the descriptive approach and compilation and analysis of information.

The result showed that the use of electronic payment tools has become an unavoidable reality, which necessitates the development of cadres and training of staff to upgrade the level of services provided.



Keywords: Electronic-Payments, Electronic-Commerce, Control, Bank, Business.

Introduction

Different countries in the developed world are witnessing a continuous revolution in the field of banking, where the transition from traditional banks with physical presence in the form of branches and transactions where the exchange of documents, coins and paper to virtual banks that rely on the pillars or electronic media, and the emergence of what is known as electronic money, And electronic banking.

The enormous technological progress since the launch of the Internet in the mid-1990s has shown the electronic banking, which relies on electronic data processing, which offers huge advantages in the field of cost and commerce. (Dahlman, 2012)

Despite the multiple advantages of e-banking, this work is risky, as there is a close correlation between these electronic processes and information security, which may lead to tampering with customers' own balances or making electronic transfers and payments through customer accounts. To face these challenges, banks have only to work hard to process these risks, which requires a great deal of responsibility to face them through the adoption of comprehensive risk management to identify these risks and reduce them through means of control and develop appropriate practical policies to process them. (Darwish & Hassan, 2012)

E-banking allows people to interact with their online banking accounts, request information and implement most banking services such as balance reports, transfers between accounts and payment of bills from anywhere in the world, and offer many benefits to consumers in terms of ease and cost of transactions.



Electronic commerce is an electronic business performance, where is based on electronic data interchange, written or visual or audible, and it includes many of the commercial activities such as the exchange of goods, the completion of sales and purchase, delivery of the contents, marketing, and After-sale services include both goods and services, as well as traditional and non-traditional activities.

Questions

In view of the above, the need is urgent for the development of the methods of control over electronic payment systems in the Arab countries to increase efficiency and efficiency and ensure the success and continued satisfaction of customers for the services provided.

:Then, this research came to answer the following questions

1. What are electronic payment systems and their risks and how controlled of them?
2. What is the types of electronic payment systems?
3. What are the risks associated with electronic payment systems?
4. What are the means of controlling electronic payment systems?

Objective

This research seeks to achieve the following objectives:

1. Identify the electronic payment methods and mechanisms.
2. Identify the nature of banking supervision systems on electronic payment methods and their suitability for technical developments.
3. Identify the challenges related to the e-banking environment.
4. To crystallize the concept of control of electronic payment methods in the framework of developing the performance of banking control units.



Methodology

to achieve the objectives of this research, the researcher used the descriptive approach, compilation and analysis of information concerned with the legal control of electronic payment systems in electronic commerce operation in Arab countries.

The legal control of electronic payment systems

In general, solutions to Internet banking security issues require the use of software-based or hardware-based systems or a combination of them

The payment systems are the backbone of any financial systems and the full economic life of an economy. The payment systems consist of several components including payment tools, rules, regulations, standards, best practices, technical solutions, financial, and non-financial bodies. The efficiency and reliability of a technical solution determines the transaction cost and time it takes to transfer funds. The time and cost of money transfer is very important in promoting financial activity. (Akhtar & Mansoor, 2014)

The e-payment system is an integrated system provided by the financial and banking institutions for making the electronic payment process safe and easy. This system usually consists of the systems and programs, and it is subject to a set of rules and laws that make all financial transactions and procedures are strictly confidential to ensure the protection and safety of the user.



The electronic banking infrastructure consists of three main components: (Darwish & Hassan, 2012)

1. Clients.
2. Servers.
3. Database.

Security is a combination of applications, systems, and internal controls used to protect data authenticity, integrity, operations, originality, and confidentiality. Proper security depends on the implementation and development of adequate security measures and security policies to operations within the Bank and to communication between the Bank and external parties. Security measures and policies can limit the risk of internal and external attacks on electronic banking systems and electronic financial systems, as well as reputation risks resulting from security breaches. (Holappa, 2001)

The types of electronic payments

The e-payment tool has emerged with the emergence of e-commerce and is therefore closely related to ICTs, so that the electronic payment methods become a component of e-commerce. In below are some types of electronic payment:

1. Smart cards, such as electronic purses. These cards resemble other kinds of plastic money, except that they contain a microchip embedded in a small gold plate used to store a certain amount of value using cryptographic algorithms that can only be decrypted by an appropriate reader. (Guadamuz, 2003)
2. Disposable and virtual pre-funded cards are a type of server-based e-money which physically appear in the form of a card. money deposited on the card itself is not stored, but on the server and can be used directly to paying at a content provider's website, Contrary to smart cards. (conference, 2004) As a form of server-based



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electronic money, these pre-funded and virtual funded cards fall within the scope of the new electronic funds directive. This type of card addresses the basic privacy requirements and allows consumers to make anonymous buy.

(Commission of the European communities, 2008)

3. Mobile payment systems. Electronic funds can be integrated into mobile devices, or stored on a card or server, a wide range of mobile payment systems has been developed. These mobile payment systems can either deduct payments from the bank account or cardholder's credit card. Mobile payment schemes are typically common to minors to make purchases of limited value.
4. Money in virtual worlds. The virtual world is a three-dimensional world on the internet imagined and created by its inhabitants. there is a marketplace where residents trade virtual services and goods. virtual worlds have created their own currency that allows their users to work within their world. Virtual world currencies comply with all criteria: they are electronically stored, issued upon receipt of funds, for making payment transactions, and are accepted by other residents.

The electronic commerce operations

The electronic commerce is a new term in the world of economics and a revolution in supply chain management and have enormous potential in manufacturing, retail and service operations.



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The electronic commerce operation is the process of exchanging goods and services electronically through electronic means via the Internet, it is a complete set of production, distribution, marketing and sale of products using electronic means.

E-commerce is an emerging area that includes direct and indirect operations related to the purchase, sale and circulation of products, services and information across computer networks. And its basis is generally linked with the nature of networks - including the Internet. electronic exchanges. (Unctad, 2016)

Kalakota and Whinston defined the electronic commerce from these perspectives:

- communication perspective: the electronic commerce is the entity providing the information, services, products, or payments via telephone lines, computer networks or any other electronic means.
- business process perspective: the electronic commerce is the application of technology to workflow and the automation of business transactions.
- service perspective: the electronic commerce is a tool that processing the desire of consumers, companies, and management to reduce service costs and increasing the speed of delivery of services while improving the quality of goods.
- Online perspective: the electronic commerce is Provides the ability to buy and sell products and information online as well as other online services. (Gunasekaran et al, 2002)

the legal control of electronic payment system in electronic commerce operation

The control process usually begins by establishing the foundations and rules necessary to follow up the business, from the stage of issuance of the payment instrument, through the operation phase, and the settlement of the relationship with the customer. The basis of this control can be explained as follows:

1. Card issuance stage.

- Checking the completeness of all customer data, determining the suitability of the payment card required and the areas of use, the maximum amount to be included in the card (credit ceiling), informing the customer of the terms and conditions related to the issuance and use of the card in terms of the rights and obligations of the holder. (Kingston, 2018)
- Conducting an analysis of the customer's previous data, determining the number of points obtained, and whether they are within the bank's acceptable limits for granting a credit card, which can also determine the type, ceiling and conditions of the card to be awarded to him.
- A contract shall be signed with the customer and the card shall be issued encrypted, included on the necessary basic data. The card and its PIN are placed in a separate envelope and delivered to the customer. (Bijak, Mues et al, 2015)

2. Card Operation Stage.

This stage relates to the regulation of the relationship between the service parties represented by the bank and the merchant or the seller on the one hand and the customer on the other. where there are strict controls regulating the aspects of the relationship between the parties mentioned. Follow-up of customer data and withdrawals made on the card with the customer through the documents that reach the bank from the internet network related to the company that owns the credit card. (Murphy, 2013)

Conclusion

E-commerce includes all commercial transactions, from the sale and purchase of goods and services. This trade is based on a computerized information system, consisting of computer and its accessories such as the Internet, telephone and fax. It is done



electronically through electronic transfers of money or shopping Payment and credit cards. the result of this research showed that:

- The use of electronic payment tools has become an unavoidable reality, which necessitates the development of cadres and training of staff to upgrade the level of services provided.
- The provision of banking services through the Internet leads to the development of the banking environment in addition to the technical characteristics of information network technology, which necessitates the existence of controls before entering electronic banking to mitigate the risks resulting from them.
- The importance of maintaining backup copies of the systems, programs and electronic files outside the work stations within the contingency plan to address any problems and ensure continuity of work.

Recommendation:

- Supporting the researchers of the development of electronic banking services to ensure and expand the spread of these services.
- The security and protection conditions of e-payments must be provided in terms of the maximum limits of what is stored in the card.
- take additional control measures on the issuance of means of payment through the availability of means of direct contact with the card issuer or the central operator to protect against counterfeiting.

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English Language Problems that face by Medical Students in EFL context

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Abstract:

The aim of this paper is to address the difficulties faced by the medical Saudi students at Prince Sattam Bin Abdul Aziz University in learning English language as second language in their field of the study. The main

results of the study revealed that medical students studying in Saudi-medium contexts, According to the descriptive statistics both the students and academicians regarded poor vocabulary poor listening and poor speaking skills as the most problematic areas for medical students.

The overall findings of this study revealed that there is a need to increase the class hours, provide technological equipment, and use The Grammar Translation method for teaching medical terminology and PBL (problem Base Learning Strategy) for teaching medical methods.

Key terms: *medical terminology, Grammar Translation method, PBL (problem Base Learning method)*



Introduction:

The widespread need for English as a second or foreign language puts a great pressure on the educational resources of many countries. ESP courses require specific language and skills that are related to communities of practice and disciplines. English plays an eminent role in higher education all over the world. There has been a worldwide growth in demand for English for Academics courses (Jordan, 1997).

English, the lingua franca of all sciences, has come out in non-English speaking countries as English for Specific Purposes (ESP) (Ghanbari, 2010). ESP is a developing branch of English as a Foreign Language (EFL) instruction in Saudi Arabia.

A significant aspect of language instruction on the higher educational level is learning English for a given purpose, with the specific aims of getting to know specialized vocabulary, increasing one's knowledge about the subject matter by reading in English, and being able to use the language in the prospective profession or study area by becoming prepared for some common situations such as carrying out higher level studies, going for an interview or conducting professional communication (Varnosfardani, 2009). Many English language courses in academic settings are based on the principle that language should be related to the purpose for which students are expected to use language after their studies. An ESP course for medical students intends to help them study their subject matter and in their career in the future. It seems that English plays a very vital role in medical studies because the students have to read medical textbooks and professional journals which are mostly written in English (Bensoussan, Collado, Viton & Delarque, 2009).

It is now widely accepted that the English language has become the language of international communication. Careful examination of the attitudes and perceptions of learners and instructors is seen to be important in determining the problems of ESP courses. Acquisition of a second language is often viewed as a process that differs from



native-language acquisition, and it is frequently assumed that factors influencing one's ability to acquire a second language do not play a role in native-language development). However, it is also well-established that knowledge of a second language impacts the ability to manage information in the native language, and current cognitive and psycholinguistic models of bilingualism explicitly posit that the two languages interact, even during language-specific processing. Yet, the degree to which acquisition of a second language influences native-language function remains underspecified, and thus, knowledge regarding the interactivity of two languages within a single cognitive system remains incomplete.

Back ground:

Students enter the medical college of PSA University in Saudi Arabia directly from high school at an average age of 18 years. The school system relies mainly on teacher-based activities, examinations based on regurgitation of memorized information and norm-referenced tests to evaluate students. As a result, most of the students acquire passive learning habits. The secondary school system in Saudi Arabia uses the Arabic language as the primary language for education; English is taught as a second language, starting in grade 4.

As the medical school curriculum is taught in English, all first year students, regardless of their language proficiency level, receive an intensive course in English along with their other premedical requirements. When they join university students are faced with increased academic demand and quickly realize that they need to develop appropriate learning skills.



Statement of the problem:

It has been noticed that medical students in EFL context are most likely facing problems in dealing with their medical subjects and that can be attributed partially to the English Language barrier. Clearly the English language used in such a context includes special terms and linguistic structures the students have never encountered before.

instruments:

Data were collected via questionnaires which are designed to perceptions of the currently enrolled students and the academicians at the medical faculty of a Saudi-medium university (PSAU). The questionnaire data were analyzed quantitatively, and the interview data were analyzed qualitatively using SPSSII method. An interview was held with the Academician of the Medical Faculty to obtain better information about their perceptions towards the English language problems of the medical students.

Questionnaires were administered to students enrolled in the first and through sixth classes at the faculty, who were available at the week when the questionnaires were distributed.

Additional demographic information about the students can be seen in Tables

Table 1 - The number of the students in various classes.

Classes	F	P
First class	46	27.2%
Second class	30	17.9%
Third class	28	16.2%

Fourth class	26	15.0%
Fifth class	30	17.3%
Sixth class	10	6.4%
Total	170	100%

Note: F=Frequency P=percentage

As can be seen in the table 1, 170 currently enrolled students were administered questionnaires. These can be divided into two groups: Group 1: includes those students currently taking English courses (1st year and 6th) group 2: consists of 4th year students who no longer take English courses. The total number of the students was 170. Their ages ranged between 17 and 29, with an average of 21.

Table 2 - Types of high schools

Types of high schools	F	P
General high school	26	15.6%
Commercial high school	1	0.6%
High school which provide intensive English education such as International high school.	143	83.8%
Total	170	100.0%

Note: F = Frequency P = percentage



As can be seen in table 2 above, the students mostly come from high schools providing intensive English education.

Table 3 -

Titles of the academicians

Title	F	P
Lecture	1	2.0%
Specializing Doctor	20	40.0%
Assistant Prof.	11	22.0%
Associate Prof.	11	22.0%
Professor	7	14.0%
Total	50	100.0%

Note: F = Frequency P =

As can be seen in table 3 above, Out of about 170 content area instructors and specializing doctors, (who were appointed to PSAU hospital after their Residency Examination for Medical Doctors, T. U. S), 70 questionnaires were distributed to those who were available on the days the researcher visited. Of these, 50 completed them fully. Out of this total 50 academicians surveyed. All academicians were male, and their ages ranged between 29 and 55, with an average of 40.

Additional information about the titles of the academicians who responded to the questionnaires

DATA ANALYSIS

Data were analyzed using the Statistical Package for Social Science (SPSSII). As there are three questions types- likerts-scale, multiple choice and ranking questions- different statistical technique were used. First, means and standard deviations for the likert scale items were calculated and analyzed. The question for ranking the priority order of the language skills difficulties was analyzed. Finally, the interview data were analyzed

qualitatively by going over the transcript and looking for answers that corresponded to certain questions from the questionnaires.

Finding & Discussion

For question in the students' questionnaire and in the academicians' questionnaire, asking about English language problems the medical students face, the descriptive statistics of the responses of different participants the students and the Academicians.

Table 4 – Participants perceptions of specific English language problems

Problem	Limited vocabulary	Poor grammar	Poor listening	Poor speaking	Slow reading	Poor writing	Bad pronunciation	Complex use of English in reading in general	Complex use of English in medical materials in English
Group	Acad.	Acad.	Acad.	Acad.	Acad.	Acad.	Acad.	Acad.	Acad.
	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL
	G-I	G-I	G-I	G-I	G-I	G-I	G-I	G-I	G-I
	G-II	G-II	G-II	G-II	G-II	G-II	G-II	G-II	G-II
	4.22	3.91	4.01	4.22	3.63	4.10	3.86	3.55	3.50
	4.15	3.15	3.87	3.97	3.31	3.46	3.36	3.71	3.65



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M	4.29	3.46	3.95	4.04	3.39	3.68	3.49	3.87	3.82
	4.01	2.85	3.79	3.90	3.24	3.24	3.22	3.55	3.48
SD	1.06	1.11	0.98	0.89	1.13	1.10	1.06	1.09	1.17
	1.02	1.31	1.12	1.08	1.22	1.12	1.22	1.06	1.11
	0.87	1.26	1.08	1.04	1.19	1.07	1.21	0.99	1.08
	1.20	1.31	1.17	1.13	1.26	1.17	1.22	1.16	1.15

Note: M=mean SD=standard deviation Acd = Academician GI =
Students group 1 GII = Students group 2

Fig.1 Participants responses on the order of language problems

Academician
1. grammar
2. writing skills
3. vocabulary

Students GI
1. poor grammar
2. poor listening
3. complex use of English in medical materials

Students GII
1. poor vocabulary
2. poor listening
3. poor speaking skill

According to the descriptive statistics in table 4 & fig. 1, the students, and academicians alike, regarded poor vocabulary (M=4.18), poor listening (M=3.89), and poor speaking skills (M= 3.98) as the most problematic issues for the students. There were some



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statistical differences between the general perceptions of the two groups of students. The 1st 3rd year students perceive poor grammar ($\chi^2=9.60$, $p<0.048$), poor listening, ($\chi^2=10.33$, $p<0.035$) and the complex use of English in medical materials ($\chi^2=10.56$ $p<0.032$) as more problematic than the 4th 6th year students. In terms of grammar problems and poor writing skills there were statistical differences between the students' and academicians' responses. The academicians find grammar ($\chi^2=15.78$, $p<0.05$) and writing skills ($\chi^2=16.80$, $p<0.05$) as more problematic for the students than the students themselves think. The academicians may have considered their own problems in writing when answering. During the informal interview with the structures, they stated that they found writing research papers very problematic for their professional studies. The grammar structures in medical texts and specific and technical vocabulary were also seen as a problematic in the previous studies. We can conclude that they are the most common problems the medical students have in various contexts.

Table 5 – The evaluation of current students' English Language skills

Skills	Very good	Good	Weak	Very weak
	S Acad.	S Acad.	S Acad.	S Acad.
Writing	32.8% 0%	44.8% 4%	22.4% 4%	0% 6%
Speaking	12.1% 0%	34.5% 0%	46.6% 10%	6.9% 4%
Reading	32.8% 0%	51.7% 4%	12.1% 8%	3.4% 2%
Listening	12.1% 2%	46.6% 8%	27.6% 2%	13.8% 2%

S= Students Acad. = Academician

In regard to the participants' evaluation of the students' current English language skills in table 5 above, it has been found that most students overestimated their ability of English and showed that they are good at all skills except in speaking. Unlikely, most instructors assessed their students' as all weak except in listening at which they felt that the students are good. This difference in evaluation has no clear significance for the study except for the repetitive declaration by the students in many occasions regarding their needs for speaking skill. The researcher believes that instructors are more aware of the students' levels of proficiency in different skills during their teaching sessions. Also, it was obvious during the research procedure that the students really have major problems in reading and filling the questionnaires items as well as in comprehending some high frequency words used in the information session which led the researcher to use Arabic instead.



Table 6 – The order of difficulties in sub skills ranking from 1-3 No. 1 is the most difficult

Major skill	Sub- skill	Most difficult	Neutral	Less difficult
		S Acd.	S Acd.	S Acd.
Writing	Writing class notes	5.2%	34.5%	60.3%
	Writing test answers	0%	2%	12%
	Writing reports & papers	29.3%	41.4%	29.3%
		2%	10%	2%
		65.5%	24.1%	10.3%
Speaking	Ask & answer questions	13.8%	32.8%	53.4%
		4%	6%	4%
	Participation with lecturer Discussion in the class	41.4%	29.3%	29.3%
		0%	4%	10%
		44.8%	37.9%	17.2%
Reading	Reading books & articles	20.7%	31%	48.3%
		0%	8%	6%
	Reading speed	20.7%	43.1%	36.2%
	Unknown vocabulary	2%	4%	8%
		58.6%	25.9%	15.5%
Listening	Understand lectures	12%	2%	0%
	Follow lecturers	32.8%	41.4%	25.9%
	Follow class discussion	4%	6%	4%
		43.1%	34.5%	22.4%
		4%	6%	4%

		24.1%	24.1%	51.7%
		6%	2%	6%

S= Students Acd. = Academician

Based on the finding in table 6 above, the evaluation of current students' and the academician order of difficulties in sub skills most medical students were consistent in evaluating their points of difficulties as they placed speaking and listening as the most difficult skills. On the other hand, they placed reading and writing as the easiest skills. That is only found in (Hwang and Lin 2010; Al – Ahdal 2010). Academician regarded reading as the most problematic skills but they ranked listening to be the second most difficult skill. Noticeably, the latter two difficulties were also seen in number of needs analysis in various settings and that attributed to the fact that the structure of English Language used in medical context is a bit sophisticated and needs more efforts to be acquired (Boztas 1988; Tasci 2007; Chia et al. 1999).

As for writing sub-skills, all participants agreed on considering writing reports and research paper is the most challenging skill. That is because all participants are aware of the fact that medical students are not encouraged to be involved in any research projects during their study (Benamer and Bakoush 2009). Writing class notes followed by writing test answers were less difficult as the students do not need really to write notes in lectures; that is because lecturers made manuals or summary sheets for the purpose of revision before examinations. Moreover, the students do not need any effort to write answers in examinations because most the questions types are multiple choice, filling gaps as well as true and false. That is really disappointed the researcher as this is not what used to be ten years ago where students were encouraged to give long answers in writing.

In regard to speaking sub-skills, there was not any significant difference between participants in ranking both class discussion and conversation with lecturers as the most difficult. The reason could be the wording of these two statements as it seems that they



have similar meaning. The students did not find asking and answering questions that difficult because they are rarely given chance to ask or even being asked during the lectures. For reading sub-skills, all participants felt that unknown vocabulary is the most challenging sub-skill that students face in their reading medical texts. That indeed matches what has been revealed in (Chia et al. 1999; Taşçı 2007; Alagozlu 1994 Yeniçeri 2008). Finally, the wording again in two statements for listening sub-skills made confusion among participants in determining the level of difficulty. Each of understand lectures and follow lecturers was ranked by almost similar number of students as the most difficult. Most students, as well as a small number of teachers felt that follow class discussion is less difficult and that could be attributed to the fact that the students are not encouraged for discussion with each other or even with their lecturers in the class.

Conclusion

In the literature, the teaching of medical terminology, with structural analysis of the term forming elements such prefixes and suffixes (Boztas, 1988; Erten 2001; Laar,1998), and teaching technical terminology as well as less specialized technical vocabulary in the context of case histories and problem- based tasks (Kimball, 1998; Wood & Head, 2004) have been discussed. Some projects, for example, by Essex Community College, and the Institute for the study of the Adult Literacy, were undertaker identifying words' meaning and integrating them with reading, writing, listening and speaking skills. As well as medical terminology, some researcher have tried to analyze the linguistic structures mainly used in doctor-patient communication (Eggly, 2002, cited in Belcher, 2004; Farnill, Todisco, Hayes 1997, cited in Shi et al.,2001) and conferences (Allright & Allright, 1977, cited in Maher, 1986). Although both the students and the faculty of Prince Sattam Bin Abdu Al Aziz University favored translation very much, as well as translation techniques, I believe the other sub skills and strategies should also be encouraged. If they can achieve these sub skills using reading strategies, they will not need much translation. However, translation can still be



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useful to understand very complex sentences, so I suggest situational translation, instead of translating all the words and sentences in the passage. For the situations in which they feel in great difficulty, for example, understanding very long sentences with complex grammar structures, translation can be useful for them. The grammar translation method has been widely used in ELT teaching worldwide. However, it - should be borne in mind that translation of medical texts has its own problems (New mark 1977, 1979, cited in Maher, 1986b) and may not be so effective as it may cause too much dependence on the practice of translation itself, which is very time consuming for the students (Maher 1986b). So, in order to fully meet the wants and desires in terms of translation in EMP teaching, the instructors who teach at the Medical Faculty should be familiar with the translation techniques and translations of the medical texts, but should certainly not rely on it fully.

The students should be given more problem-oriented tasks which will reflect their cognitive ability and their own academic skills. Academicians and upper classes who are familiar with the benefits of PBL (Problem Base Learning strategy) agree that it can be adapted to use in English for medical purposes classes. The aim of PBL is to enable students to understand related content knowledge and to develop the metacognitive skills which will make them good learners and problem solvers (Harland, 2003). Harland states that facilitating learning in PBL groups is different from the traditional teachers' role, and teaching becomes more like research, supervision and mentoring. Maxwell, Bellisimo and Mergendoller (2001) state that in PBL, students build their own learning objectives and select learning resources that are most appropriate to the problem they are seeking to settle. Teachers monitor the students with suggestions for further study or inquiry but do not assign predetermined learning activities. Instead, students research a situation, develop appropriate questions, and produce their own solution to a problem. According to Wood and Head (2004), medical PBL classes can be simulated in English for Academic purposes classes, with the English language instructors being the facilitator of the



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students' medical studies in English. In these classes, English instructors are not expected to teach them the medical concepts or topics. Rather their role is to facilitate the students' using English to convey their ideas while discussing and trying to find solutions to medical problems. The necessary grammar or vocabulary items are acquired during the implementation of the tasks. Also, learners acquire good knowledge during their research and can easily integrate it into their existing knowledge. According to the literature, PBL is an effective method in that it not only improves medical students' clinical skills but also their self-learning skills, making them more autonomous learners of health care issues (Antepohl & Herzig, 1999; Hmelo, 1998; Shanley, 2007). Using PBL in their English classes can also be beneficial to help the students adapt more easily to the PBL approach when they face it in their medical classes.

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Production and screening of anticancer enzyme from marine Fungi

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Abstract

The Asparaginase has a great importance; because of its anti-cancer potential. This study aimed to produce and characterize L-asparaginase from *Emericella sp.* The parameters such as incubation period, temperature, pH, carbon and nitrogen sources, were studied to indicate a maximum production of L-asparaginase enzyme by *Emericella sp.* The specificity substrate was also studied. The results of this study showed that maximum activity was noted on the 6th day of incubation period with incubation temperature of 30°C and pH 7.0 and 120 rpm. Glucose (0.2%) was the best source of carbon. Among all the various nitrogen sources at concentrations ranging from 0.1% to 0.5%, ammonium nitrate (0.4%, 0.5%) showed a maximum production of L- asparaginase. L-asparagine was considered as a natural specific substrate to the L-asparaginase and retained 100% relative activity.

Keywords: *Emericella sp.*, L-asparaginase, optimum parameters, Substrate specificity.

Introduction

Fungi are the basic organisms in ecosystems, where the environment supports its growth anywhere, either on water or in land ⁽¹⁾. Special fungal diversity in the marine environment is still rare compared to many bacteria and viruses. The information that we have is based on research that was done in the laboratory, for this reason a selective group of very few fungal genera are being studied rigorously⁽²⁾. Recently, There has been a significant interest in the huge biodiversity of marine fungal communities and their high capacity to produce many biologically active compounds to balance marine environments ^(3,4). Fungi play significant roles in marine environments besides bacteria, which are

among the most prevalent species in these environments and the largest contributor to the organic matter production. Many fungal communities can exist in the sea such as: aquatic fungi which grow permanently in seawater, optional marine fungus that grow in both sea water and fresh water, and terrestrial fungi that grow in sea water when conditions of growing are suitable^(5,6). Many studies indicate that, many marine fungi have the capability to produce L-asparaginase^(7,8) such as *Fusarium*, *Penicillium*, and *Aspergillus*. These mitosporic fungi, are commonly reported in several studies to produce asparaginase^(9,10). L-Asparaginase is an enzyme that is widely used as an anti-tumour agent and acts on a substrate such as L-asparagine.

The L-Asparaginase enzyme has many advantages such as it is non-toxic, can be operated with complete ease at the specified location, cheap and biodegradable⁽¹¹⁾. On the other hand, other anti-tumour agents are very expensive and very painful when administered to the patient. The present work focuses on the production of L- asparaginase from *Emericella sp* and optimization of cultural conditions to getting a maximum production.

Materials and Methods

Sample collection

Sixty-seven samples were collected from nine sites along Alexandria Eastern Harbor in Egypt. Each sample consisted of both water and sediment. Samples were collected in sterilized screw cap bottles 300ml. Collected samples are stored until they were processed during no longer than 24 hrs. later.

Fungal isolation

Sediment samples

Each sediment sample (10 gm) was added to 90 ml of sterilized distilled water. The resulted suspension (0.5ml) was spread onto potato dextrose agar (PDA) with 50 mg/L tetracycline to prevent the bacterial growth. Then incubated for seven days at 28°C and the colonies were started to be observed after 4 days. After complete incubation, the colonies were identified morphologically.

Seawater samples

Each sea water sample (10 ml) was diluted in 90 ml of sterilized distilled water. The previously prepared dilution (1 ml) was further diluted in 9 ml of sterilized distilled water to achieve a dilution of 1^{-100} M. One milliliter of each of the prepared 1^{-100} M dilutions was spread onto potato dextrose agar medium with 50 mg/L tetracycline to inhibit the



bacterial growth and also incubated for seven days at 28°C. The resulted colonies were then identified morphologically.

Phenotypic characterization

All isolates grew equally well on potato dextrose agar plates at 28°C. Most colonies grew up to 2.4–4.1 cm in diameter after 48 h of incubation. According to their morphology and growth characteristics, the resulted well colonies were selected for more characterization and genetic identification ⁽¹²⁾.

Molecular identification of the fungal isolates

Fungal growth was suspended in 100 µl sterilized distilled water and boiled for 15 min. Amplification of ribosomal rRNA gene was done by using universal fungal primers ITS1 and ITS4. The PCR products were detected by using 1% agarose gel, then emerged in ethidium bromide solution overnight, and UV transilluminator was used for visualization. The resulted amplicons were cleaned using Gen Elute™ PCR clean-up kit according to instructions. BLAST analysis was carried out by using the NCBI database ⁽¹³⁾. The resulted sequence then was submitted to NCBI Gen bank.

Determination of L-asparaginase activity from fungal isolates

Plate screening of L- asparaginase producing fungi

The isolated marine fungi were grown on Modified Czapek-Dox (MCD) agar medium. The incubation was carried out at 25°C for 7 days. A positive result was detected by the appearance of a pink zone which indicates of the L-asparaginase production ⁽¹⁴⁾.

L-asparaginase production

The isolates were tested for L-asparaginase production by growing on the MCD medium for 3 days. Disc technique was carried out by inoculating a 5 mm disk into 100 ml of the MCD medium then incubated at 28°C for 7 days. After the incubation period, the broth was centrifuged at 10,000 rpm for 10 minutes at 4°C. The resulted supernatant was obtained as a crude enzyme to estimate L-asparaginase activity.

Evaluation of L-asparaginase

To evaluate L-asparaginase, 0.5 ml of asparagine (0.04 M), as a substrate, 0.5 ml of buffer (0.5 M), 0.5 ml of enzyme and 0.5 ml of distilled water were added. The obtained mixture was incubated for 30 min. Then, 0.5 ml of 1.5 M TCA (Trichloroacetic acid) was



added to stop the reaction. 0.1ml of the mixture was added to 3.7 ml distilled water and 0.2 ml of Nessler's reagent and incubated for 20 min. The OD of the result was estimated at 450 nm.

International unit

One IU of L-asparaginase activity is defined as the amount of enzyme which catalyses the formation of 1 μ mole of NH₃ per minute under the optimal assay conditions.

Statistical Analysis

The analysis of variance was carried out according to the rules of ANOVA. The significant differences between the means, were determined through Duncan's multiple range Test (DMRT).

$$\text{Units/ml enzyme} = \frac{(\mu\text{-mole of NH}_3 \text{ liberated}) (2.5)}{(0.1) (30) (1)}$$

2.5 = Initial volume of enzyme mixture (ml)

0.1 = Final volume of enzyme mixture (ml)

30 = Incubation time (min)

1 = Volume of enzyme used (ml)

Characterization of L-asparaginase

L-asparaginase, after the fermentation process, were separated out by using filtration, centrifugation, and ammonium sulfate salt precipitation and then purified by chromatography techniques, this resulted enzyme was later used for further studies.

Optimization of parameters for production of L-asparaginase

The optimization of parameters for production of L-asparaginase were carried out, that by changing one parameter and keeping the others unaltered to giving the maximum production of L-asparaginase. The optimization of L-asparaginase by *Emericella sp* depends on several factors such as incubation period, temperature and pH. Also, different carbon and nitrogen sources on L-asparaginase production were studied.

Effect of incubation period

To **determine** the maximum L-asparaginase production at different incubation periods, 100ml of MCD containing 1% asparagine at pH 6 then inoculated and incubated at



different growth intervals. The filtrate was incubated and observed from 1 to 8 day at 30°C, and the clear supernatant was used to determine the enzyme activity.

Effect of pH on enzyme activity

To detect the effect of pH on the production of L- asparaginase by *Emericella sp*, the reaction medium was adjusted to various pH ranges of 3, 5, 7, 9 and 11, then inoculated into the MCD medium with a 5mm culture disc and incubated for 7 days at 30°C. The enzyme activity was determined.

Effect of temperature on enzyme activity

To determine the maximum production of L-asparaginase at different temperatures, the reaction medium was inoculated and incubated at different temperatures of 25°C, 30°C, 35°C, 40°C and 45°C for 7 days. The enzyme activity was determined.

Effect of carbon source

Five carbon sources; starch, lactose, maltose, sucrose, and glucose (0.2%) were used for producing a maximum production of asparaginase. The influence of different carbon sources on efficient production was assessed and incubated at 30°C for 7 days. The supernatant was utilized for determining the enzyme activity and protein content.

Effect of nitrogen source

The effect of different nitrogen sources; yeast extract, ammonium nitrate, peptone, sodium nitrate, and potassium nitrate were studied on L-asparaginase production in a range of concentrations from 0.1% to 0.5% and incubated at 30°C for 7 days. The enzyme activity was obtained by utilizing the supernatant to measure the enzyme activity.

Substrate specificity

Mixtures that contained L-Asparaginase enzyme and buffer with different substrates; D-asparagine, glutamine, and L-asparagine were used under the present study^(15, 16).

RESULTS AND DISCUSSION

Production of L-Asparaginase

In the present study, thirty-six strains were isolated and named serially from MF1 to MF36. Of the 36 fungal isolates, 23 isolates (63.8%) were screened positive for the L-asparaginase activity. The potential strains were selected on the presence of pink zone indicating the L-asparaginase production (Fig.1). Among these marine fungal isolates, MF30 was selected as a potential strain for the production of L-asparaginase. The isolate MF30 was selected for the optimization studies based on the initial screening by plate assay method. The isolate was identified as *Emericella sp.* and the resulted sequence was submitted to Gen bank with the accession no. AUMC 6937. An increase in pH due to ammonia accumulation in the medium results in the change of color from yellow to pink and is suggestive of the fact that the marine fungi are able to utilize the asparagine as a substrate by the secretion of the enzyme L-asparaginase. The results of the plate assay method procedure for L-asparaginase production are depicted in Table.1. The study indicated that the L-asparaginase production was maximum (6.05 IU) at the 7th day of the incubation period ⁽¹⁷⁾.

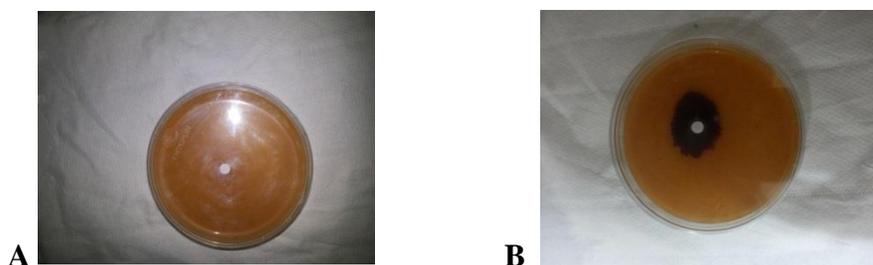


Fig.1: Fungal isolate on a Modified Czapekdox plate (MCD)
A) Asparaginase negative plate B) Asparaginase positive plate

Table.1: Screening of marine fungi for L-asparaginase production

MF.No	Zone diameter(in mm)
MF1	0
MF2	23.00±0.58
MF3	36.10±0.40
MF4	0
MF5	0
MF6	0
MF7	0
MF8	46.13±0.81
MF9	27.70±0.20
MF10	48.01±0.47
MF11	44.00±0.50
MF12	53.30±0.80
MF13	39.00±0.59
MF14	0
MF15	41.60±0.62
MF16	28.01±0.31
MF17	52.00±0.45
MF18	45.40±0.11
MF19	0
MF20	36.00±0.50
MF21	0
MF22	0
MF23	36.00±0.24
MF24	27.29±0.85
MF25	45.00±0.51
MF26	0
MF27	36.55±0.50
MF28	0
MF29	47.10±0.80
MF30	66.00±0.51
MF31	34.40±0.30
MF32	26.90±0.80

MF33	35.00±0.50
MF34	29.00±0.60
MF35	0
MF36	0

Optimization of culture parameters for L-asparaginase production

The culture parameters for obtaining a maximum production of L-asparagine have been studied. These parameters play an important role in the production of L-asparaginase, which necessitates conditions in which fungus can produce high yields of L-asparaginase. Chemical and physical parameters such as incubation period, temperature, pH, carbon, and nitrogen sources, have an essential role in improving L-asparaginase secretion.

Effect of incubation period

In the present study, the effect of incubation period was estimated to obtain the maximum production of L-asparaginase by *Emericella sp.* The activity of L-asparaginase was determined from 1st to 8th day to estimate the optimum incubation period for the maximum production of L-asparaginase. It was observed that the maximum production of L-asparaginase was estimated on the 6th day of incubation period with an activity of 0.65 U/ml (Figure 2). Further increase in the incubation periods after the 6th day showed a gradual decrease in L-asparaginase production. The result obtained may be due to depletion of nutrients in the media or the production of metabolites which may result in a change in pH or growth inhibition⁽¹⁸⁾. Some reports indicated that only two days of incubation period were required to produce of L-asparaginase enzyme by *Fusarium sp.*^(19, 20). Other studies reflect on the shorter incubation period required for L-asparaginase production^(21, 22, 23). On the other hand, similar reports showed that the maximum incubation period to produce of L-asparaginase was on the 6th day of the incubation⁽²⁴⁾ which supported our results.

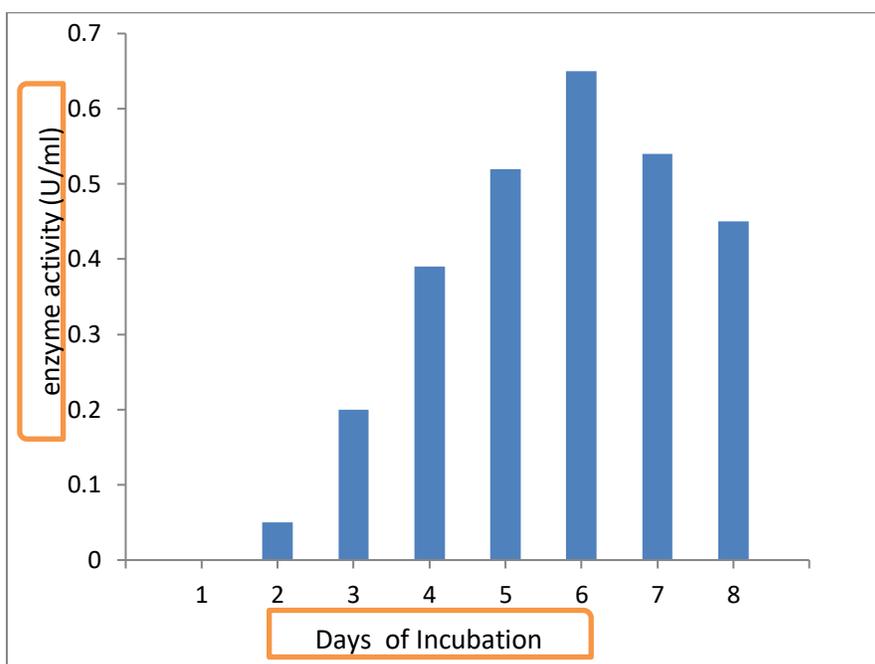


Figure 2: Effect of incubation period on L-asparaginase production

Effect of pH

Enzyme activity is significantly affected by pH change which can be inhibited or enhanced. thus, can affect the growth of microorganisms⁽²⁵⁾. It was observed that the maximum enzyme activity was obtained at pH 7.0 with an activity of 0.671 U/ml. A gradual decrease in the enzyme activity observed lower and higher pH 7 may be due to the inhibitory effect on the growth and enzyme production by acidic and alkaline pH (Figure 3). Also, any variation in pH will result in a change in the properties and form of the enzyme or the substrate. thus, will prevent binding of the enzyme to the substrate⁽²⁶⁾. Some reports, which closes to our results, indicates a maximum enzyme activity lower than pH 7^(27,28,29).

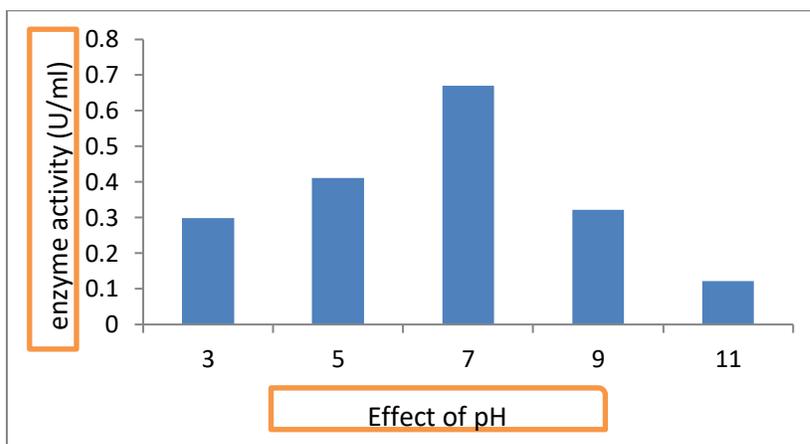


Fig 4: Effect of pH on L-asparaginase production

Effect of Temperature:

Temperature is the most important environmental factor for L-asparaginase production; because it regulates the growth of the microbes and the enzyme secretion. Also, Temperature affects the activity rate of the enzyme; because it affects the rate of its chemical reaction. The maximum enzyme production was observed at 30⁰C with an activity of 0.415 U/ml (Figure 5). The enzyme activity started to decrease at the higher temperature of 30⁰C due to the denaturation of partial enzyme leading to a change in the metabolic activities of the microbe. Similar reports support the same results on other marine fungi^(30, 31, 32). On the other hand, some reports indicate that the optimum temperature for L-asparaginase was found of 37 and 45⁰C^(20, 22).

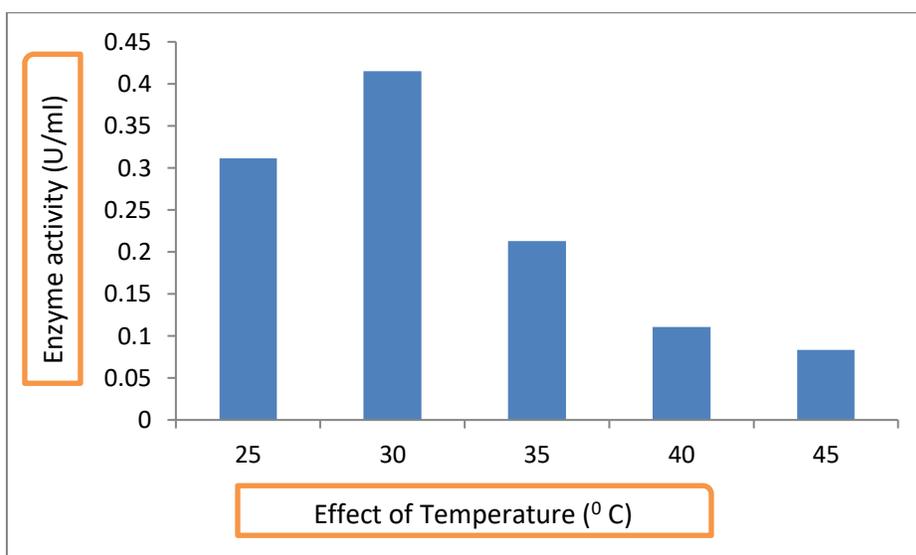


Fig.5: Effect of Temperature on L-asparaginase production

Effect of Carbon sources

Carbon is the main component of microbial cells due to its structure and function. Most of the fungi prefer simple sugars as a source of carbon other than carbon compounds ⁽²⁷⁾. In this study, five different sugars were studied for their ability to L- asparaginase production. The present study reveals that the maximum production of L-asparaginase when Glucose (0.2%) is used as the highest carbon source compared to other sugars with enzyme activity of 0.163U/ml (Figure 6) ⁽³³⁾. Similar studies have reported glucose as a good carbon source to induce L- asparaginase production by marine fungi ⁽³⁴⁾. A study on L- asparaginase reveals glucose at (0.4%) concentration as the best carbon source ^(31, 35).

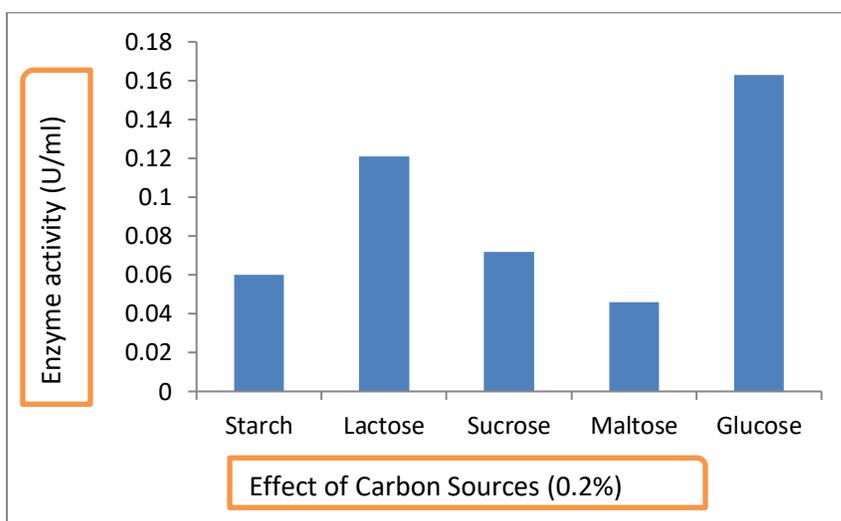


Figure.6: Effect of different Carbon sources on L-asparaginase production

Effect of Nitrogen sources

In this study, five different nitrogen sources were studied for their ability to L-asparaginase production. Each one of these nitrogen sources was added to the MCD medium individually at concentrations ranging from 0.1% to 0.5% for L- asparaginase production then supplemented into the reaction medium. The results indicated that ammonium nitrate at concentrations of 0.4% and 0.5% indicates a maximal L-asparaginase production (Figure 7). On the other hand, sodium nitrate, yeast extract, peptone and potassium nitrate showed the lowest production of L-asparaginase. The Similar report indicated that sodium nitrate showed the lowest production of L-asparaginase ⁽³⁶⁾.

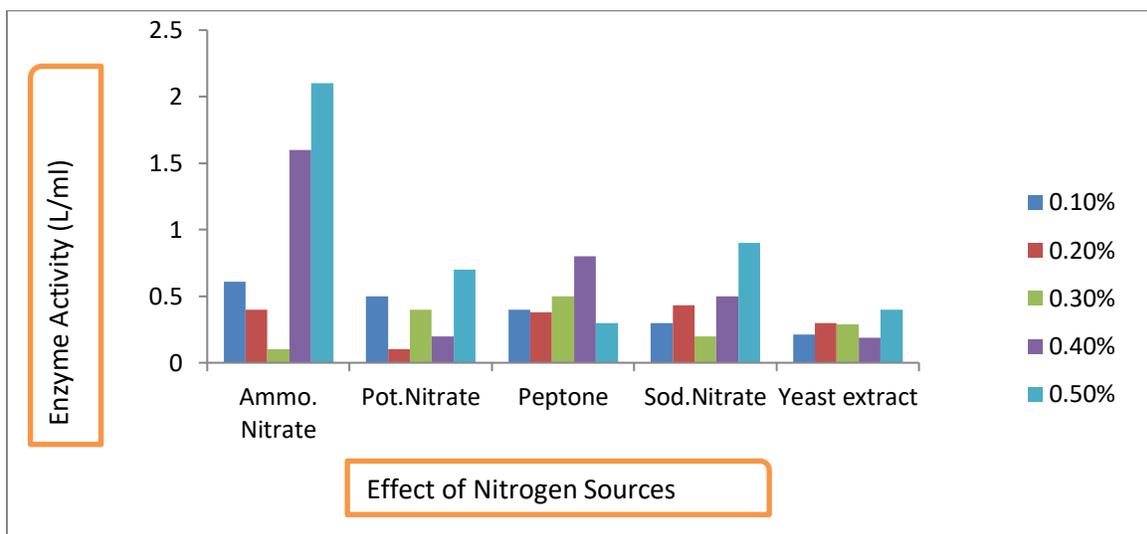


Figure .7: Effect of different nitrogen sources on L-asparaginase production

Substrate specificity of enzyme

The results indicated that the enzyme was 100%, 3% and 2% active on L-asparagine, D-asparagine, and L-glutamine respectively (Table. 2). This characteristic of the enzyme is very necessary to treat patients requiring incomplete removal of asparagine. Similar studies indicated the same results ^(37, 38).

Table.2: Substrate specificity of enzyme

Substrate	Concentration(mM)	Relative activity (%)
L-Asparagine	10	100
D-Asparagine	10	3
L-Glutamine	10	2



CONCLUSION

The present study indicated that the L-asparaginase production from marine fungi. Among 23 isolates, the marine fungus FM30 (*Emericella sp.*) exhibited a maximum L-asparaginase production. It was observed that maximum enzyme activity was recorded on the 6th day of incubation period at pH 7.0 with an incubation temperature of 30°C at 120 rpm. the glucose (0.2%) was the best carbon source. Also, the ammonium nitrate (0.4%, 0.5%) showed a maximum production of L- asparaginase. L-asparagine was used as a specific substrate to the L-asparaginase with 100% relative activity.

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A Review of Error Analysis with Particular Emphasis to the Causes of Interlingual Errors and their Correction

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Abstract :

Considering its importance in second language acquisition (SLA), this paper provides a general descriptive review of error analysis (EA). The paper, likewise, attempts to give a particular emphasis to an important axis of EA, the causes of interlingual errors and their correction. The causes of these errors can become explicit by investigating some intralingual factors that include overgeneralization, faulty teaching, fossilization, avoidance and hypercorrection.

Keywords: *Error Analysis ; Overgeneralization ; Faulty teaching ; Fossilization ; Avoidance ; Hypercorrection*

1. Background

SLA is definitely an intricate process. Learners task to acquire a second language is always confronted by numerous difficulties. Thus, experts in the field of SLA should continuously provide the necessary theories and their praxis that may aid learners to take steps up the ladder in this respect. Zhao (2008) stresses a similar point of view by elucidating the value of SLA theories on language acquisition.



In this connection, as known , theorization has covered EA including one of its indispensable aspects, the causes of intralingual errors and their correction . Within reviewing EA , the researcher attempted to lay stress on the causes of interlingual errors and their correction .Comparatively, interlingual errors were regarded by recent research in SLA as more important than interlingual errors and other errors belonging to different language components that may be outside their scope .

2. Error analysis in second language acquisition

2.1 Error

To begin with, a linguistic error occurs when second language learners deviate from the proper grammatical rules of second language . Thus, it is an inaccurate form in learners' language that differs from the forms used by competent or native users of the target language . Douglas (1994) states a similar idea by defining a linguistic error as an apparent deviation from the grammar of a native speaker reflecting the interlingual competence of second language learners . The term interlanguage refers to the overall linguistic system which characterizes the out-put of second language learners prior to their proficiency in the target language . A linguistic error is usually salient to native or competent uses of a target language . As stated by Gass and Selinker (2001) , it can be described as a warning signal that provides evidence of learners knowledge in a second language . Broadly , errors are either interlingual , or interlingual . In second language acquisition and as mentioned by Othman (2015) , interlingual errors result from the interference of the native tongue , whereas interlingual errors result from the ineffective traits of learning such as the faulty applications of rules . Thus , one can say , interlingual errors are generally attributed to learners' partial knowledge of second language . Conversely , interlingual errors become apparent when learners insert elements of their native language onto the patterns of the target language .



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Error identification is accessible in terms of form, linguistic level, modality, and what may be called broad causes . The form of sentences, i.e. , the way they are constructed denotes the errors made by second language learners . For instance, learners' sentences may contain insertion, substitution, and omission . The linguistic level and modality, also, facilitate the task of detecting the errors made by second language learners . The linguistic level and modality relate to the different aspects of language like the level of proficiency in the four language skills, grammar, pronunciation, style, etc. Finally, the broad causes of errors can provide an access to the identification of these errors . The researcher believes the broad causes of errors are imputable to the concepts of interlingual and interlingual . In other words , learners' partial knowledge of second language and language transfer can be investigated as rich and exhaustive sources for tracing errors .

2.2 Error and mistake

In SLA, the words 'error' and 'mistake' may seem to indicate the same thing but they differ in a sense . Feltsen (2009), on the one hand, sees errors as something that we have to learn in order to correct . That is, second language learners consistently tend to make errors prior to receiving knowledge on them . An example of a typical error that is usually made by second language learners is the use of an infinitive with to after a modal auxiliary verb . Those learners, most probably, say or write *you may to take my car* in lieu of *you may take my car*. Other examples of typical errors are the use of the verb be followed by an incorrect form of a main verb as in the sentence *She is listens to music*, and the use of the verb do followed, also, by an incorrect form of a main verb as in the sentence *I did not completed the assignment* . Mistakes, On the other hand, can be corrected since knowledge on these mistakes has already been learnt .

2.3 Error analysis



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When the study of errors in SLA gained ground, contrastive analysis (CA) appeared prior to EA in the 1950s as a means for handling this process . CA was originated by a behaviorist theory which attributed errors in second language learning to the interference of the native tongue . CA, as maintained by Khansir (2012), is a sub-discipline of linguistics which attempted comparing a first language with a second language to make apparent the similarities and differences between these languages to finally predict errors in using a second language . The Encyclopedic Dictionary of Applied Linguistics (1999) postulates that the differences, in particular, between these languages are behind the difficulties in learning a second language. Hence, they could be regarded as a basis for the remedy and analysis of second language errors .

EA, the topic of the present paper, concisely, examines the deviations of second language learners from target-language criteria . As defined by Richard (1980), "EA is the collection, classification, and analysis of errors in the written and spoken performance of second language learners ." EA emerged in the late 1960s as a revolutionary alternative to CA . It has been stated earlier that CA attributed second language errors to language transfer only . This was regarded as a major shortcoming of CA that founded for EA to gain more privilege in studying errors . Comparatively, EA does not only attribute errors to language transfer, but also assumes their indication of global strategies .

As assumed by Corder (1967), EA can be advantageous to SLA since it provides insights into the innate nature of learners' system in the process of SLA . He describes errors as systematic and consistent deviances which give a comprehensible idea about how learners acquire second language . Then, errors should not be a source of inhibition to learners . Instead, errors are surely a basis that makes clear their learning strategies in SLA . Khansir (2012), considers learners' errors as contributory to making learners active participants in the formation and revision of hypotheses regarding the target language rules . James(1998) views errors as significant from a teaching perspective since they help in making decisions about what to teach . In view of these opinions , one



will not be exaggerating if he considers EA as one of the tools that provide a profound idea of SLA .

Despite the merits of EA , some researchers have examined its shortcomings . For instance , as maintained by James (1998) , EA leaves an impression that second language learners are erroneous . James sees those learners as not deliberately deviant in their language use . As stated by the researcher within the background of the present study that SLA is definitely an intricate process . Thus , in SLA , it is natural for learners to be erroneous . Another shortcoming of EA can raise when we keep in mind the so-called avoidance phenomenon . To put it differently , this shortcoming suggests that EA could not cover all learners' errors due to the simple reason that learners adopt an avoidance strategy in SLA . That is , as agreed by many researchers , certain language aspects are avoided by learners due to their difficulty . So , the expected errors in these language aspects would not be explicit in the investigation of EA . Also , focusing on accuracy at the expense of complexity and fluency is a noticeable defect of EA . These three ways should be considered together in describing learners' language . Housen et al (2009) view these ways as descriptors for the oral and written performance of second language learners as well as indicators of their proficiency and progress in language learning . Finally , there is a unanimity among many researchers that EA lacks subjectivity and mainly manifests statistical data .

2.4 The steps of analyzing errors

The late British linguist , Stephen Pit Corder has published thorough articles on EA . His writings provide a basis for EA research . Most researchers consider Corder as the creator of procedures that greatly provide an answer to how error analysis could be conducted . These steps , consecutively , appear in collecting samples of learner language , identifying errors , describing errors , explaining errors and finally evaluating errors .

2.4.1 Collecting samples of learner language

As stated in the abstract , the paper attempts to give a particular emphasis to interlingual errors within the general review of EA . The researcher has previously explained that these errors occur while acquiring a second language . Hence , generally speaking , one reason that makes collecting samples of these errors divergent is their occurrence while learners handle the different components of second language . These language components create a rich environment for the errors second language learners tend to make . Another reason that makes collecting samples of interlingual errors a divergent task appears in their occurrence within different educational stages keeping in mind the fact that the nature of errors could differ from an educational stage to another . For instance , the nature of errors in the secondary stage differ from the nature of errors in the university stage . A third reason that makes collecting samples of interlingual errors a divergent process is their occurrence on both levels of second language , the spoken level and the written one . In order to make clear statements as regards the kind of errors learners produce and under what conditions , Al-Khresheh (2016) suggests that the sample of learner language should be definite . It should similarly considers learners level and manifests either the spoken or written form of language .

2.4.2 The identification and description of errors

Identifying errors requires deciding on their type and to which language component these errors belong . Also , as has been clarified by the researcher under the sub-heading entitled error and mistake , the identification of errors necessitates showing the difference between error and mistake . In any sample of learner language which is collected for the purpose of analyzing errors , attention should be given to errors . As has been mentioned earlier , mistakes are less serious than errors and learners do not need to receive education on their correction in order to correct them .

To describe errors , it is necessary to relate them to the language level in which they occur . That is , the semantic level , the syntactic level , the morphological level , etc.



Also , Tizazu (2014) , asserts that the description procedure involves explaining how the improper forms of second language learners differ from the competent forms of native speakers in similar contexts .

2.4.3 The explanation and evaluation of errors

The explanation and description of errors denote processes which have something in common . Explaining why errors are made considerably founds for improving SLA (Torike , 2006) . The explanation of errors involves providing a comprehensive and an in-depth idea of their classification and causes . The researcher considers interlingual and interlingual errors as terminologies that embrace the other classifications of errors . More or less , these classifications include errors of performance and competence , and local and global errors . Performance errors are less serious than competence errors and usually result from fatigue and hurriedness . Comparatively , errors of competence reflect insufficient learning and can generally be attributed to overgeneralization . As explained in the abstract , the explanation of overgeneralization as an interlingual factor will make the causes of interlingual errors explicit . It will be examined in the subsequent part of the present paper . Local errors are less serious than global errors . Local errors do not hinder communication , while global errors can cause the meanings of utterances to be incomprehensible .

In brief , the evaluation of errors involves determining how serious these errors are and whether or not they disrupt communication and understanding . Part of what has been discussed above , within the explanation of errors , can account for the evaluation of errors .



2.5 The causes of interlingual errors and their correction

2.5.1 The causes of interlingual errors

It has been stated in the abstract that the causes of interlingual errors can become explicit by examining the factors behind them . As illustrated by Touchie (1986) , these factors include overgeneralization , faulty teaching , fossilization , avoidance , and hypercorrection .

2.5.1.A Overgeneralization

Second language learners make overgeneralizations by extending their proper knowledge of grammatical rules and different forms in given contexts to other contexts where these grammatical rules and forms do not apply . For instance , a second language learner may make an interlingual error by forming the past simple of 'eat' as 'eated' because he or she knows that the past simple form of 'play' is 'played' .

2.5.1.B Faulty teaching

Faulty teaching can lead second language learners to make interlingual errors . Faulty teaching includes ineffective materials and the awkward way of presenting these materials . Hence , second language teachers should be knowledgeable and experienced . They should build their curriculums on second language learners' needs and the choice of agreed upon teaching strategies and principles .

2.5.1.C Fossilization

The researcher believes that fossilization is interrelated with faulty teaching . At times , some interlingual errors are labeled as fossilized . These errors are interrelated with faulty teaching because second language teachers make some errors which their learners



inherit . By time , these errors become persistent and very difficult for second language learners to get rid of . So , as mentioned , they are labeled as fossilized . For instance , teachers' errors in pronunciation are liable to be inherited by their learners and then become fossilized .

2.5.1.D Avoidance

The researcher has earlier made reference to the idea of avoidance but from a different perspective , how it could be a shortcoming in the process of investigating EA .

Alduckhayel (2014) claims that the concept of avoidance was originated in 1974 by Jacquelyn Schachter in his book *An Error in Error Analysis* . Schachter confirmed the significance of examining second language forms learners tend to avoid in addition to the forms they tend to produce . Simply put , avoidance is a chosen strategy by second language learners to perform easier communicative tasks in lieu of the ones they consider as difficult . Thus , second language learners intentionally avoid the language uses they find difficult . In case they attempt to handle these difficult uses , second language learners will definitely be liable to make interlingual errors .

2.5.1.E Hypercorrection

Sometimes , second language teachers exert untold efforts in correcting learners . This pressing way of correction causes learners to make errors in their try to produce correct forms . Eckman and Iverson (2013) point out that hypercorrection describes a situation in which a form is extended beyond its linguistic usage resulting in an erroneous form . To reduce hypercorrection , varied methods of correction should be introduced in the second language classroom which should finally make learners less dependent on their teachers in correcting errors .



2.5.2 The correction of interlingual errors

Interlingual error correction is not a definite process . What to take into account as regards this process may differ from a teacher to another . It almost depends on teachers' general knowledge of their second language learners and the convenient methods of correction that should consider learners' individual differences .

Evidently , the interlingual errors to be corrected occur on the spoken and written levels of second language .

Generally , to avoid interrupting learners and making notes of their improper utterances to be corrected by the end of classes is a common strategy for correcting spoken errors . Other valid correction strategies for both language levels , as maintained by Teba (2017) , include self-correction , peer correction , and teacher correction . As known , self-correction takes place when learners correct themselves , while peer correction refers to learners' correction of each other . Peer correction creates a positive class atmosphere and leaves second language learners with a good impression and confidence since they realize that their teacher is not the ultimate source of correction . Teacher correction is necessary and can be used to re-explain problematic areas in language especially those areas in which self-correction and peer correction prove to be inefficient .

Recent research has indicated three types of interlingual errors to be targeted by error correction . These types of errors include stigmatizing errors , high frequency errors and the errors that block the meaning or understanding . Stigmatizing errors may be a little understandable . Then , their illustration is more necessary than the other two types of errors . Touchie (1986) , referred these errors to sociolinguistic aspects of language learning . To phrase it differently , learners who belong to lower classes make stigmatizing errors while learning a formal language due to their exposure to an informal code before learning that formal language . The informal code is commonly referred to as restricted code .



3. Conclusion

By exploring EA within the present paper , its importance as an integral part of SLA has become quite apparent . There is no disagreement about the intensive research on EA in second language contexts . Nevertheless, one could say , its practical application in the second language classroom is seldom . Teachers should benefit from EA research by the frequent analysis and correction of the errors that emerge as part of the English language syllabi they teach . So , learners' errors will be reduced and they will acquire more proficiency in SLA .

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The governing laws of the Franchise Contract "Commercial License Contract" in accordance to the Jordanian law

A review paper

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II. ABSTRACT

In Jordan, Franchise business discloses a critical investment market that contributes and support the Gross domestic Product (GDP) of the country, and develops the growth of trade and economy [1]. However, many challenges faced by the investors might hamper the investors in Jordan from starting a franchise business. For example, the lack of legal framework for franchise business regulation is one of the most challenging issues toward franchise in Jordan. Therefore, the main aim of this paper is to explore the governing laws of the franchise contract in accordance to the Jordanian law. The findings of this study argued that the current governing laws of franchise contract in Jordan fail to provide a comprehensive control system of franchise legal aspects. In addition, the development of a specific legal framework is highly needed to govern the franchise business in Jordan.



III. INTRODUCTION

Through the name and experience of franchisor, the franchise contract offers many interests to the franchisee such as technical, marketing, and administrative support [2]. Further, the franchisee would have the ability to gain loans from several funding agents and this let him more certain to achieve his project [11].

Nowadays, the franchise has many sophisticated areas but the experienced and well-informed business persons have recognized the power of business relation between franchisee and franchisor. However, other contracting franchises are not qualified with the world business requirements including skills and practice [18]. The franchise experts must meet the qualifications for prospective franchise at least in the developing countries [18].

The most issues concerning the interests in franchise are connected with lawyers, bankers, and franchise experts. The issues related to lawyers include the lack of support from governments and banks, inadequate protection of franchise rights, repeated regulation changes, insecure conducted business, and slow justice system of debt. Regarding bankers, the slow of legal system, low TEA index, and mentality brought issues to franchise. The franchise experts may lack of sufficient experience and the lack of sufficient knowledge about franchise [17].

The reform of regulation is necessary because of inability of legislative intervention to achieve the goals of franchising [13] [14]. It includes the revision of regulation programs and the features of collaboration, participation, and democracy [12]. **Many challenges faced by the investors in Jordan from starting a franchise business such as the lack of legal framework for franchise business regulation is one of the most challenging issues toward franchise in Jordan. Therefore, the main aim of this paper is to**



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explore the governing laws of the franchise contract in accordance to the Jordanian law.

Jordan is located between Europe, Asia, and Africa and its strategic position made it a crossing country in the geographic view of Middle East of North Africa (MENA) region. Due to its centred location, Jordan remains a preferred destination of tourist in MENA region with its historical sites (i.e. Wadi Rum, Dead Sea, etc.) and moderate climate.

The sole port city, Aqaba, provides many promising benefits for tourism-related projects such as hotels. The expansions of this port presented many opportunities in infrastructure projects. **Jordan composes geopolitical focus on the investments in reconstruction Syria, Iraq and other regional projects.**

Jordan has many strong cooperative relationships with neighbours and international business community. The imports in Jordan include industrial machinery, food and agriculture, mineral fuels, transportation equipment, textiles, chemicals, manufactured goods, and clothing and footwear. The exporters to Jordan include Saudi Arabia 20%, European Union 20%, China 11%, United States 6%, Egypt, South Korea, Japan, and Turkey. **Jordan composes geopolitical focus on the investments in reconstruction Syria, Iraq and other regional projects.**

Jordanians keen to get latest updates about the US Franchises, while local investors are interested franchising. However, the Jordanian market can't grasp huge number of individual franchise. On the other hand, the retail and service franchises in US have extremely increased in recent years.



IV. DEFINITION OF THE FRANCHISE CONTRACT

Franchise term comes from French word “Franchise” derived from Frank which means a free to do something. Franchising is originated to describe the exception from prevention, privilege or authorization [2]. From legal perspective, franchise can be defined as a binding contract between two parties, where the franchiser provides the franchisee the right of implementing a business with conversion of fees and payment. In simple view, franchise includes a development of business model that grants the right of conducting business to another party which is franchisee [3].

The franchise allows the franchisee to get the franchisor bands and operating methods under licenses and agreement on the terms and conditions of the franchise contract. Other definitions of franchising have emphasized on the permitted relation between the franchisee and franchisor [16]. Moreover, franchising concepts offers favourable mixture of economic scale and trademarks. It is also associated with the place and intellectual property of services, goods and techniques of market [17].

V. BRIEF HISTORY

In the lase decades, the popularity of franchising has grown significantly with the powerful tools of globalization. In addition, culture mix and consumption habits enabled people to move and know common brands for services, goods and quality [20]. **In Jordan, Franchise business discloses a critical investment market that contributes and support the Gross domestic Product (GDP) of the country, and develops the growth of trade and economy [1].**

In 1970, the GDP per capita has increased by 351% in Jordan, which decreased to 30% in 1980, and increased again to 36% in 1990. **Since 1999 when King Abdullah ascension to the throne, certain steps have been taken to motivate foreign investment and to develop competitive economy on market base, outward oriented feature, and global**



nature. It became the first Arab country signed Free Trade Agreement (FTA) with United States in 2001. By this agreement, the tariff barrier on most goods traded between two countries have been removed and the exporters of US have received advantage with selling high-quality products in more attractive prices.

Consequently, it has continued like this from 1999 to 2008, but it has slowed up to only 2% in 2011 after Arab Spring. **In 2014, Jordan played toward a set of legislative reforms such as investment law, public private partnership law, and income tax law. Investment law provides fair treats and incentives with local and foreign investors in different sectors including tourism, hospitals, energy, agriculture, water, transportation, and industry. Moreover, many governmental firms such as tourism sector [4], pharmaceuticals, and information communication technology have been reformed in the past decade.**

However, the economic growth in 2015 has reduced due to the security issues and Arab spring in region including closing borders with Syria and Iraq, and the arrival of refugees. Hence, the Jordanian government has made many decisions to reform measures, foresing assistance, and loans as well as reduce near term financing gap with savings. Nevertheless, the general view of Jordan economy remains advantageous and favourable in many sectors. In 2015, the GDP was ranked at 89th in the world and it increased until 2016.

In 2016, Jordan economy grew 2.1% even with the continuous domestic and reginal challenges. As part of International Monetary Fund Extended Fund Facility program, the government followed a set of economic reform measures in August 2016. However, it has slowed due to the costs of refugees and debts till 2018. These days, more than 150 local and international franchise businesses are operating in Jordan [1].

VI. RELATED WORK

Many studies have examined the state and development of franchise and the associated issues and challenges in many countries like Ukraine [5], Croatia [6] [7], UK [8], South Africa [16] [18], EU [9], Malaysia [15]. On the other hand, A few papers have investigated the laws of franchise due to the modern nature of this phenomenon.

The thesis [9] aimed to show the underdevelopment of franchise in Europe due to the subjected regulatory environment. Two factors of franchising in EU include failure of regulatory ecosystems to govern franchising and lack of homogeneity between different ecosystems. The failure by member states involves failing in adequate reinforcing economic drivers to attract franchisee and franchisors with reduced level of inherent consequential risk. Moreover, the barriers to trade between member states affected by the lack of homogeneity between legal ecosystems. Three commercial imperatives include promotion for market confidence in franchise, ensure of pre contract, and impose of mandatory taxonomy of rights and obligations.

The study [11] has determine the obligations for the franchisee and franchisor. It revealed that under franchise contract, the franchisor got many obligations that can be classified into moral obligations and materialistic obligations. The moral obligations include technical support, trademarks, and know-how. Under materialistic obligations, the documents, supplies, equipment, and machines have to be delivered by franchisor. The study also have addressed the obligations of the franchise including non-disclosure of secrets and financial obligations. Moreover, the main cases and effects of franchise contract termination have been treated in this study. The study argued that the Jordanian legislator should take into account the results and recommendations from this study to achieve best results of activating franchise contract in Jordan.



The thesis [12] has investigated the regulations franchise agreement and how it achieves the goals of franchise code of conduct namely the increased levels of participants certainty the imbalance of the relation power. It has expanded the concepts of regulation based on new learning in regulation. Further, it examined how the layers of regulation in franchise sector in multi-layered governance system contribute to achieve the mentioned goals. The findings presented a suggestion for setting up the relation between the franchisor an franchisee where uncertainty and imbalance of power existed based on self-regulation and market layers. The interaction of standard and relational qualities reinforce the market interaction between two parties and the associated conditions in the contract. The thesis concluded that the self-regulatory tools are used for direct intervention in franchise code of conduct as a public layer of control.

The increase of global franchise opportunities in Islamic finance is slow compared to the increasing and expansion of global Islamic finance industry. For this reason, the paper [15] presented an investigation of the legal framework for franchise in Islamic finance industry of Malaysia. In 2013, the franchise industry has contributed 2.8% to the GDP in Malaysia. A qualitative legal approach was adopted by the study to analyse the related applicable legislations in Shari'ah Islamic finance. The findings of the study showed that the lack of specific framework for Shari'ah Islamic finance has reduced the opportunities to expand the franchise industry. In conclusion, it is expected to create a global hub of Islamic finance in Malaysia to transit to the global level.

The study [18] has analysed the franchise aspects especially violations and penalties in South Africa compared to some examined countries. It revealed that only Australia empowers the enforce of penalty against violating franchisor. South Africa allows for rigid penalties and accountability making its laws the most rigorous amongst other countries [16]. Moreover, the franchising appears more active in France, Chine, and US with less imposed penalties. US and France recognized the importance of providing



certain disclosure for franchise before signing the contract. The agreement is enforceable against the franchisee after it is signed.

VII. METHODOLOGY

In this paper, we carried out a social research based on a systematic study that investigates the political, social or other conditions to uncover the influencing factors towards a specific phenomenon. It aims to understand why something occurs, the causes of problems and extract the inferences and conclusions. This research attempts to determine the significance of franchise through an exploratory study on global franchise to draw the value of franchising laws. We collected the required materials about this topic.

VIII. FRANCHISE AGREEMENT

The franchise allows the franchisee to get the franchisor brands and operating methods under licenses and agreement on the terms and conditions of the franchise contract. The written form of franchise agreement is mandatory according to the laws even though the law of franchise does not require to write franchise contract. **The franchise agreement involves also getting protection against other parties from the use of trademark without license. Every franchise contract should also provide confidential information relevant to the franchise and innovation activities made by franchiser and franchisee.**

Generally, the countries can be divided into four groups: 33 countries have laws and direct regulations for franchising; countries have direct or indirect laws and don't have direct regulations for franchise; countries don't have national franchise legislation and their provinces have specific laws like Canada; and countries regulate franchising by both state and federal governments in different degrees like US [3].



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Franchise typically encourages economic activity through improvement of provision of services and distribution of products, as well as its ability to establishing assistance to enter new competitors to the market [19]. By franchising, the independent traders can set up their businesses quickly and with greater opportunity of success. Consequently, it provides better chance for franchisers to compete. From consumers' perspective, there is a possibility of fair sharing of benefits and combined advantages of franchisers. Moreover, franchise ensures of constant quality of services and products [9].

Franchising business model can minimize the uncertainty in riskiness of growth phases. Additionally, franchising has been considered an imperative strategy for business growth through improving job creation and encouraging more foreign investors to enter market. Hence, it has an essential impact on the world economy. In 2015, the franchising revenues registered about 1.6 billion dollars, which represents 2.3% of world GDP and opens 2.2 million job opportunities [20].

IX. TYPES OF FRANCHISES

There are four types of franchising in accordance with object of the transaction. These types are distribution franchising, franchising services, management franchise, and business format franchise. The most common type of franchising is distribution of franchising that involves retail sale by franchisee to the consumer of a certain group of products to carry out a distinct name of franchisor such as furniture. In franchising of services, the raise up of this type has made it to offer services (carrying distinct name, trade name or trademark) with aid of franchisee and instructions franchisor to the consumers. Business format franchise enables the franchisor to grant the rights to business process, trademarks, and trade names, to sell the products. Management franchise is focused on managing franchise by the franchisee to allow individuals with movable skills to lead ownership of business for success [22].



X. THE IMPORTANCE OF FRANCHISE LAW

The significance of franchise comes from the consequences of the technological development, economic growth, free trade, and the recent communication tools. Franchise contract has emerged two sides of improvements and dual obligations to the franchiser and franchisee [10]. In the scope of franchise contract, there are variant effects of franchise the is dependent to its subject and value. In developing countries, the advantages of franchise contract adjust the domestic economy by developing the trade to get more customers in target market and distributing goods and services in well-ordered manner [11].

Franchise is a tools that contributes to develop the emerging market and the integration with global development. A few papers have investigated the laws of franchise due to the modern nature of this phenomenon. The exploration of franchise law may aid to make sure of the continuous growth of franchise and to determine the reasons for specific laws [20].

Franchise contract carries out many advantages and disadvantages for different parties of contract. In specific, the main advantages of franchising contains advantages for franchisee and franchisor [21]. Similarly, the disadvantages are also regarding franchisee and franchiser. The advantages of franchise contract for franchisee include the following [22]:

- Keeping the managerial and legal independence of business.
- Utilizing technical experience of franchisor.
- Lower capital needed than when individually starting business.
- Getting technical support from franchisor.
- Better prices to purchase merchandise through massive market of franchisor.
- Improving the credit to stand in business and getting finance.



Subsequently, the main advantages for the franchisor are stated as follows [21] [22]:

- Increasing number of distribution of outlets of services and products.
- Having better return on capital.
- Expansion of the network of services internationally without engaging in procedures that involve expenses.
- Increasing the name and reputation of business rapidly.
- Improving competitive advantage in the market.

Although of these advantages of franchise for franchisee and franchisor, there are some disadvantages. The disadvantages of franchising for franchisee are listed as follows [22]:

- Dependency on the franchisor.
- Limited initiative due to following of the franchisor instructions.
- Dependency on commercial success that affect the image of franchisee in the market.
- The obligations and limitations imposed by the clauses in the franchise contract.

The disadvantages for the franchisor are [21]:

- The selection of franchise is not resistant to the failure risk.
- Difficulty of exercising controls of control application of instructions.
- Profit shared with franchisor is less than when opening a branch.



XI. OBLIGATIONS OF FRANCHISE

The written form of franchise agreement is mandatory according to the laws even though the law of franchise does not require to write franchise contract. This contract defines the rights and obligations of the contracting members. The main obligations of franchisor include the following [22]:

- Provision of usage and exploitation of franchise package.
- Integration of franchisee with franchising system through necessary technical support.
- Finishing up the agreed products in contract to the franchisee.
- Provision of agreed products in contract to the franchisee.
- Constant technical, organizational and financial supply of franchise with advice.
- Confirm the product advertise agrees in franchise contract.

The main obligations of the franchisee comprise the followings [22]:

- Pay the franchisee to the franchisor the entry fee associated with accessing franchise system.
- Pay the franchisee to the franchisor the percentage from profits based on sales number and on periodic basis.
- Promote sales using the means of franchiser supplies and personal work.
- Share expenses of advertise and training programs organizations.
- Confirm to the uniformity, preparation, composition meaning, and product characteristics principles of franchise system.
- Getting exclusive products from the franchisor directly or indirectly.
- Respect the trust by franchisor in following instructions and keep secret of trade instead of unfair competition.



XII. TERMINATION OF FRANCHISE CONTRACT

Franchise contract can be agreed on either fixed or unfixed duration depending on the agreement. The fixed term of franchise contract is terminated by the expiration of the agreed date. However, each contracting party can terminate the contract earlier through summary termination due to important cause not only when breaching contract, but also in case of decline financial status. In unfixed period of franchise contract, the termination occurs upon ordinary termination or summary termination and it should not be untimely or before the amortization of recipients' invests or pay to the other [23].

A. *Franchise laws governing in Jordan*

From business perspective, franchise business is not similar to starting a new business or purchasing existed separate business. The difference is explained as follows: the setting up or buying an existed business determines where, how, and how long the business will run, while franchise business represents the franchiser who is responsible for managing these things. As a result, franchising is a combination of both independently owned business and vertically integrated company owned operation [1].

However, many challenges faced by the investors might hamper the investors in Jordan from starting a franchise business. For example, the lack of legal framework for franchise business regulation is one of the most challenging issues toward franchise in Jordan.

Due to the profitable feature of franchise agreement in the investment markets of Jordan, the current laws to govern franchise agreement are not sufficient. Therefore, a specific legal framework should be developed to support franchise agreement [1]. In fact, no real governing law of the legal aspects of franchising in Jordan. Conversely, various performances could influence the elements of franchise



agreement in Jordan like Trademark Act and Unfair Competition and Trade Secret Act [1].

Moreover, there is no specified legislation under Jordanian legal system to control the franchise agreement or license agreement contracted between the franchisee and the franchiser. This leads to slow down and prevent the advancement in local and foreign investments due to the inability to set up franchise laws in Jordan [1].

Some examples of recent franchises in Jordan are Ruby Tuesday, TGI Fridays, ACE Hardware, and Applebee's. In fast food industry, examples of franchises include KFC, McDonald's, Pizza Hut, Burger King, and Ponderosa Steakhouse. In other categories, Franchises include child care such as FasTracKids. In recent years, many new malls and outlets have opened in Amman and others are in construction that are estimated to provide many opportunities for more franchises.

The lack of specified legislations of franchise agreement in Jordan could seriously hamper the advancement of local and foreign investment to set up franchise businesses and hinder the progress of the country and the opportunities to work for people. To resolve these challenges, the Jordanian homebased franchises should be encouraged to make sense that the local and international franchises are governed and controlled by the same fair rules and regulations. These rules and laws have to make sure that the business format franchises is governed and the protection of franchiser and franchisee interests is achieved.

Finally, this study argued that the current governing laws of franchise contract in Jordan fail to provide a comprehensive control system of franchise legal aspects. In addition, the development of a specific legal framework is highly needed to govern the franchise business in Jordan, and the benefits and costs of laws must be balanced.



XIII. CONCLUSION

In this paper, the discussion provided about the laws governing franchise agreement in Jordan. The main basics of franchise contract include grant license to franchisee to allow him use franchiser trademark. Further, the franchise agreement involves also getting protection against other parties from the use of trademark without license. Every franchise contract should also provide confidential information relevant to the franchise and innovation activities made by franchiser and franchisee.

In conclusion, the lack of specified legislations of franchise agreement in Jordan could be resolved through developing a legislative framework to improve the local and foreign investment to set up franchise businesses. Furthermore, the developed framework could enable more progress of the country and the opportunities to work for people. Finally, the franchise law should apply the fair rules and regulations on the local and international franchises, as well as balancing the benefits and costs of laws.

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