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## DESIGNING A SUPPLEMENTARY SYLLABUS FOR TEACHING SCIENTIFIC ENGLISH AT COLLEGE LEVEL

**\*Maysam Tareq Mahmood, \*\*Dr. Shoaib Saied Fahady**

\*University of Mosul, College of Arts, Iraq

\*\*University of Mosul, College of Education for Humanities, Iraq

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**ABSTRACT**

The domain of ESP becomes central in language teaching and learning and all the educational fields should take into account the required methodologies, tasks, syllabus design, activities, and evaluation. What is noticed is that the adopted syllabus in teaching undergraduate students is unable to offer the real educational and academic needs of the students. In other words, it is insufficient and it lacks the integration between the real educational objectives and the needs and desires of the students studying it. Accordingly, the researchers attempt to design a supplementary pedagogical course for teaching scientific English to students of the departments of Biology in the University of Mosul.

**Keywords:** *syllabus design, scientific English*

**STATEMENT OF THE PROBLEM:**

English plays a great role in many fields especially in education, science, technology, politics, and industry and many other fields. Language is a vehicle for human communication. Through the language of the message and the intentions that a person wants to convey, he can be accepted and relates to other people. Language plays such an important role that it can be said that language is an asset of life, especially English. English is seen as an international language which is widely used as a means of communication between nations around the world. There are many reasons why English is important. Firstly, English is called the "language of the world" because English is the language used internationally. Secondly, English plays a significant role in all fields such as politics, economy, technology, science, education, trading and other fields so it reflects power. It's almost mandatory for people to speak English if they want to enter the global workforce.

School students and college students are learning English from their school as one of the subjects to accomplish for passing their grade.

According to the above mentioned reasons, the domain of ESP becomes central in language teaching and learning and all the educational fields should take into account the required methodologies, tasks, syllabus design, activities, and evaluation. It is worth mentioning that the textbook adopted to teach English in Iraqi colleges that is assigned by Iraqi Ministry of education is called The "New Headway" which is written by Liz and John Soars. Due to the fact that there are levels in all colleges so the mentioned textbook is divided into six series to be given to the different stages in the Iraqi colleges. Accordingly, the series begins from the level of Beginner, Elementary, Pre-intermediate, Intermediate, Post-intermediate, and finally advanced with each textbook there will be a guide for the

teachers besides activity book to practise the exercises.

Despite the fact that students enrolled in College of Education for Pure Sciences/Department of Biology have gained high marks in the admission exam to college, they still face problems in reading and communicating effectively in English. Furthermore, college students show little interest for learning so they show distinct lack of motivation to learn English. Students have a scanty opportunity to deal with English language within their specialization in their department. As a result, they are not well placed to obtain knowledge in the area of their scientific majors as long as English is used in these departments as the medium of education.

Additionally, the aims and purposes of teaching English are not clear to most lecturers and teachers particularly the aspect of developing the students scientific competence and knowledge in English as a medium of instruction. Despite the great amount of teaching time specified for English classes, they still lack the effective guidance to gain the required information in order to equip college students with the effective knowledge that pours within their specialization. Students really need to be supported by effective goals of learning English during their academic study and to

be empowered in their specialization in their proficiently lives and career.

In the context of college of Education, students are not satisfied with their English textbook (New Headway plus/ Pre-intermediate ) due to the fact that this textbook is unable to equip students with the required knowledge during and after graduation in real-life settings. Due to the aforementioned reasons, the researcher has made a questionnaire addressing to the teachers as well as the students. The purpose behind it is to investigate the learners' needs and wants as well as what they lack in English.

What is noticed is that the adopted syllabus in teaching undergraduate students is unable to offer the real educational and academic needs of the students. In other words, it is insufficient and it lacks the integration between the real educational objectives and the needs and desires of the students studying it.

The focus of the adopted textbook (Headway Plus/ Pre-intermediate) is on teaching general English. There is no special focus on teaching English for specific purposes (ESP). Iraqi textbook of Biology does not support the students with the effective, necessary topics, terminologies and the exercises that help them to be able to use English effectively.

College students studying in the department of Biology are really in need to study English textbook which helps them to acquire and develop their competencies to deal with scientific topics during their study and after graduation within their specialization in real-life situation. The students are really in need of more ESP courses than what is currently given to them that couple with other topics.

According to the aforementioned reasons, the research problem of the current study is grounded on “how to design a useful, specific, applicable and scientific syllabus based on the current needs and desires of the teachers as well as the students in the department of Biology. Simply put, “how to design a scientific syllabus which enables the learners to be competent and well qualified students for dealing with the scientific topics adequately and effectively in specific situations in the life. The supplementary syllabus is hopefully intended to meet the scientific goals of the teachers and the learners as well.

#### **Aims of the study:**

The current study aims at;

-Designing a scientific supplementary syllabus for second year students at the Department of Biology/College of Pure Sciences/ University of Mosul.

#### **Significance of the Study:**

The present study is significant in the sense that:

1-It is hoped that this suggested syllabus will open a new horizon for other researchers to investigate new aspects.

2-It is hoped that the suggested syllabus will help syllabus designers and textbook writers.

3-This work will be the first step in designing syllabus for scientific English and it will help teachers of English to introduce their topics depending on such a syllabus.

4-Helps students in the College of Education, Department of Biology perceive and identify their needs in English language.

5-Makes the needs of undergraduate level students clearer for themselves and for their teachers and the authorities at university level.

6-It places the foundations of designing an ESP syllabus for students who have received general education with very poor background in English Language.

#### **THEORETICAL BACKGROUND:**

##### **Principles of Syllabus Design**

The field of curriculum is basic in all educational programs. Curriculum refers to

a planned interaction of learners with instructional requirements basing on their content, materials and processes for evaluating the attainment of educational objectives. To achieve the teaching and learning aims and outcomes and to create a well-organized system to lead to effective teaching program, certain characteristics should be accounted for in designing curriculum.

These include the principle of personalization, breadth, relevance, challenge and enjoyment.

The principle of personalization and choice is one of the key principles of curriculum design. This principle represents a significant role in helping teaching professionals and learning institutions in their practice and as a basis for reviewing, evaluating and improving the learning and teaching process once taken into account in the process of teaching and learning (Singer, 2000).

Another principle of curriculum design is called breadth in terms of learning experience. Under this principle, all learners are provided with the opportunities for a broad range of experiences in learning process (Apple, 1990). This is due to a fact that their learning is planned and organized in a manner that they learn and develop

through a variety of contexts within both the classroom and other aspects of school life.

Relevance in terms of content is another key principle of curriculum design that should not be left out. The curriculum should contains realistic aspects and represents real life settings which means it should be authentic in its nature and organization. This is because it allows learners to recognize the purpose of their learning and related activities. It is put in place to ensure that learners see the value of what they are learning and its relevance to present and future lives. Realistic situations will expose the learners to natural educational settings and to be involved with the educational program.

Concerning the principle of challenge and content enjoyment which is seen as one of the major principles of curriculum design. Learners are supposed to find their learning process as challenging, attractive and motivating (Halpern, 1998). This is achieved when the curriculum encourages high motivation ,aspirations and ambitions for all learners despite their intellectual ,intelligence differences. In addition, learners are made to experience a suitable level of challenge that enables them to achieve their potential.

Finally, coherence is seen as another important principle when organizing the curriculum. It allows a combination of the learner's different aspects of learning activities to form a coherent experience that enhances the achievement of the learning outcomes. It must provide the logical sequence of items and subject matters. So coherence and integrity are essential in every design (Meyers and Nulty 2008 cited in 2009 :126).

Based on the aforementioned principles of curriculum design, the researcher believes that there is no doubt that curriculum design must be creative, purposeful and it plays a key role in the production of essential educational programmes to enhance not only learners' final learning outcomes and destinations but also well general learning and teaching approaches and requirements. In addition it operates on different levels in other words, it should be stages concerning the planning and the decisions also, the decisions at one level must be compatible with those at the other levels

### **Syllabus Design Based on The Needs Analysis**

Syllabus designers and material developers conduct the designing of syllabuses based on educational implications and what they consider as

significant for the students in every level of education they are. Based on this procedure, students have to learn what is imposed on them by syllabus designers not what they really need for their learning which can be applicable for their real life out of classroom. Wilkins (1981) states that "starting from an awareness of the learners and their needs, it is proposed that from the total set those categories should be selected that are relevant to the particular population of learners."

According to this view, designing syllabuses should be based on needs analysis of the students. Needs analysis is a family of procedures for gathering information about learners and communication tasks for use in syllabus design. With regard to the needs analysis, White (1988) states "the teacher or planner investigates the language required for performing a given role or roles.... needs analysis specifies the ends which a learner hopes to achieve, but not the means by which the ends will be reached." So teachers and syllabus designers should take into account what students really need, rather than what they think they need to learn and master. In a nut shell the researcher argue that needs analysis is the core and the first step in designing any specified course of ESP.

**PROCEDURES:****- Needs Identification**

The notion needs analysis or needs assessments refers to the process of gathering educational information about a specified group of learners. The focus on the learning needs. Then, these needs will be translated into learning objectives. Consequently, they will be the basis for the development of teaching materials, tasks, tests, activities, evaluation strategies, etc. Accordingly, needs analysis is seen as the basis for building the course design and curriculum development.

After deciding to conduct the current study in the department of Biology, the researcher starts gathering information which is very important in order to define the academic needs of the students under investigation. The researcher in the current study addresses the teachers and the students as well. The researcher uses a questionnaire which is previously made to investigate the attitudes and the perspectives of the students and the teachers, (see appendix 3).

The items of the questionnaire address the teachers and the students to investigate why they study English and what they lack in their prescribed English textbook of the first year. Also, the major aim is to get insights into their

perspectives. The results of the given questionnaire to the students and the teachers indicate that they are really in need to a syllabus that matches their academic aims and desires. They state that they need reading comprehension passages and they want to be equipped with the necessary scientific concepts which are the basis of their domain (scientific concepts).

**- Instructional Material**

The students are previously share the same material namely **The New Head Way Plus**. This textbook teaches general English which focuses on educating the college students and equip them with the general linguistic needs. EGP facilitates the learner to acquire knowledge of the four language skills: listening, speaking reading and writing to improve their proficiency level. It is important to state that the current textbook adopts the communicative approach in that it tries to improve the basic four skills namely reading, writing, speaking, and listening but the fact to be stated here is that although the four skills of the language is taught, still with limitations. The topics of the students' textbook deal with social life situations and themes that deal with the target language in general:

**Getting to know you, The way we live, It all went wrong, Lets' go**

**shopping, What do you want to do, Tell me! What's it like,** etc. are examples of the units of the prescribed textbook.

The researcher has selected six topics based on the learners' needs after analyzing the needs of the students to fulfill the previously assigned aims of the current study. The six topics represent scientific English. The topics are selected to make the students learn and acquire scientific English effectively. **Biology, Pharmacy, Plants, Ecology, Biotechnology, and Genetics** are the included topics of the suggested syllabus design.

In the same vein, the topics included in the suggested course will be presented within the first semester of the academic year for second stage students in the Department of Biology/ College of Education for Pure Sciences.

#### **- Steps for Material Design**

Teachers are frequently involved in the process of selecting and grading an ESP material. In general, developing the material for teaching an ESP courses is regarded a typical feature of an ESP courses. Materials should reveal the view of language learning objectives and philosophy. Richards proposes that steps for selecting the material is not an easy task because this will be in line with the objectives of the course and needs analysis

which intern will be the focus all the time (2009:258).

Several ways for approaching this process. The following guidelines by (Tomlinson 1998 cited in Marjanovikj 2019 :168) can be considered a process of materials writing : –

1-The material should meet the learners' needs to fulfill them. It should facilitate the learning process in that it should achieve the course objectives within specified time.

2- The instructional material should be selected to encourage learners to use language effectively matching their own purposes. Moreover, it should be based on exploring areas of language meaning, function, structure and skills.

3- Finding out appropriate ideas and texts to work. Teachers should mediate between the learner and the language to be taught .Also, physical production of materials must be considered in terms of layout, type, size, visuals, pictures, etc.

To conclude the researcher designed the course according to two phases: Macro phase for all the four stages of the Department of Biology, and Micro phase which is the focus of the second-year students of the Department of Biology in the University of Mosul. It is worth mentioning that for each stage there will

be a sub-division to enable the learners learning and understand the materials effectively.

### - Material Authenticity

Authentic material is used to develop the overall learning skills. Due to the fact that normal materials do not serve and satisfy the needs and interests of the learners, teachers tend to prepare some additional, useful authentic materials to be used in the language courses. The major benefit of using authentic materials is to engage the learners with the topics, themes from real-life situations. Authentic material is a “bridge between the classroom and the outside world” (Wong et al, 1995:322). Such materials are written to serve the learning objectives as well as real-life situations. Generally, such types of the materials are written by native speakers to achieve a communicative purpose in which it is used by specific learners. They can support the process of learning with motivating topics and themes. Robinson adds that “A key concept felt to be particularly relevant for ESP, is that of authenticity”(1991:54).

It is important to mention that the rationale behind adopting authentic texts and materials is to boost the motivation of

the learners and make the process of learning more easier and fruitful .

### - Material Selection and Sequencing

Syllabus designers believe that the process of designing a syllabus is organized on the following dimensions:

A-

Choosing aspects of language knowledge and activities to be emphasized.

B-Functions and structures of the language.

C-Dividing the materials into units.

D-Sequencing the previously selected material.

As for the design of the current suggested course, the researcher designed the instructional material on two basic dimensions namely **Macro** and **Micro** levels. The researcher has prepared a plan for the four stages to organize and teach the material according to their level of knowledge and information in addition to their level of the stage in the university.

The following figure will show the macro designed syllabus for all stages in the Department of Biology with regard to reading comprehension strategies and skills:

Table 1

Macro supplementary course for teaching scientific English

	Direct Strategies		Indirect Strategies	
	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>
Reading Comprehension skills	Previewing Skimming	Scanning skipping	-Inference - Looking for patterns of Organization	Study skills - text marking -summarizing - critical reading
Vocabulary Learning	cognitive	cognitive	Social	Meta-cognitive
Translation		Translating Scientific Phrases	Translating Scientific Paragraphs	Translating Scientific Essay

**Macro Divisions of the Syllabus**

It is clear from the above figure that the **Macro** division is based on three basic aspects: reading comprehension skills, vocabulary learning skills and translation. According to the first dimension which is **reading comprehension** skills and strategies, these skills will be distributed among the four stages as following:

A-the first stage will be studying previewing skills of reading comprehension strategies.

B-the second level will be taught taking in to account scanning and skipping.

C-as for the third level, third year students will be taught reading comprehension

focusing on interference besides looking for patterns of organization.

D-fourth-year students studying in the Department of Biology will be taught reading comprehension skills when the emphasis is put on the following aspects

- 1-study skills
- 2-text marketing
- 3-summurizing
- 4-critical thinking.

From another perspective, the second dimension of the **Macro** division, is related to the vocabulary learning strategies. It is obvious that the college stages are initially divided into four stages, so the researcher has divided vocabulary

learning strategies with regard to the four levels of information as well. The **Macro** division is built according to its strategies in terms of four levels as shown in the above figure they are:

A-the first year college students will be taught vocabulary strategies which are cognitive in nature.

B-second year college students will be taught cognitive scientific vocabulary .

C-third year college students will be exposed to social vocabulary strategies.

D-fourth year students of Biology will be taught another type of vocabularies which are based on meta –cognitive perspectives.

Due to the fact that the current study will be grounded on three basic components, the third perspective will be translation. Obviously, college stages are four, so translation scientific concepts in turn are sub-divided on these four academic years. Accordingly, the first – year in the college teaching scientific vocabulary for the purposes of translation will be organized on the bases of translating basis of the translation as a whole. Concerning the second academic year in the college, the process of teaching translation to scientific vocabularies will be moved to advanced level in that translation will take bigger pieces of items

namely phrases. Moving to the third-year , the study in the college will be demonstrated on another perspective which is translating scientific paragraphs. To end the whole process of translating, fourth–year college students in the Department of Biology, the emphasis of teaching translation will be on translating scientific essays to achieve the process of learning translation skill effectively.

### **Micro Divisions of the Syllabus**

After establishing a clear learning purposes, the second step will be formulating the aims of the course. The formulated goals are built on the questionnaire given to the second-year students studying in the Department of Biology/ University of Mosul. After setting the primary aims of educational and academic needs, a need for thinking about the content and how to balance it according to a reasonable sequence of learning. In the current design ,the second division is called **Micro** division. According to the objectives of the design, the content for teaching scientific terms, teaching reading comprehension strategies and translating scientific words will be focused on heavily.

To teach reading comprehension strategies, scientific topics and translation, there must be a clear sequencing for the

course content and materials. There should be a best coverage for the given topics. Scientific vocabularies which are frequently occur should be included to enhance vocabulary learning effectively. Then, students should be trained to be independent users and learners of the language teaching strategies. Useful linguistic items, skills and abilities should be emphasized (Nation and Macalister,2010:40-44) .

The basis for selecting the scientific vocabulary concepts are the highly frequent occurrence of them in the context of the language course within the field of the proficiency of the second-year students of Department of Biology. Teachability is another criteria in teaching vocabulary items in the current design of the current course , an ESP course expose students to utilize the relevant scientific concepts to the field of study which is Biology. For instance , organism , cell and transmission are relevant words and can be teachable effectively. Another procedure in teaching vocabulary items is availability; it means that these words come to the mind regardless to the fact they are frequently used in the field of the study (Richards, 2017:37-39).

It is reasonable that vocabulary shows an important role in language use especially in foreign language learning. It

is the core of language skills. More importantly, it appears to function as a foundation for communication. Regarding the current study, the following are the skills that are focused on in teaching reading comprehension to the subjects of this study.

#### **- Content Specification of the proposed Syllabus**

After identifying the learners' needs, the second step is specification of the component of the units of the course. Due to the fact that this study is conducted in a college of Pure Sciences, the units of the course design will be put in a way that fits the scientific needs of the students. Gürbüz (2013:39) points out that “the objective of organizing a syllabus should be to promote learning, and not just to provide a description of the language. Consequently, the content matter should be organized in such a way so as to facilitate teaching and learning. The unit of organization should also suit the particular purpose of learning”.

Each unit of the proposed syllabus is organized to teach scientific reading comprehension passages. Each passage has a specific theme with regard to the scientific field of the students' study. Furthermore, the scientific passage is

followed by questions of mainly two types: recognition and production.

As for the recognition questions ,each item of the questions is followed by four options and the student is required to

recognize the appropriate , correct answer .Every stem (item) measures specific linguistic ability. The following are the items that measure the recognition level of the students:

**Table 2 Specification Content of the Recognition level**

Content of the Item	Behavioral Objective	Item Number
Decide the suitable	To read the passage quickly	2
Find a suitable definition	To read and scan the passage	3
Matching related meaning	To read and scan the passage	4
Finding the opposed meaning	To recognize word meaning	5
Inferring word groups	To deduce word groups	6
Reading intensively to infer	To comprehend the text	7

As for the second component of the linguistic measurement, the production level, it is clear that this level is conducted to measure the students ability to write and answer the questions using their own words. The following table will illustrate how the researcher construct the unit questions to investigate the students written abilities with regard to scientific perspectives:

**Table 3 Specification Content of the Production level**

Content of the Items	Behavioral Objectives	Items Number
Reading intensively	To translate the words into Arabic	8
Reading critically	To write the main idea	9

According to the third dimension of the unit, it is specified to include Everyday English. This section is constructed to measure the speaking competence of the students in that it involves questions about general habits and information .

**- Design Description**

Once course outcomes are defined, the need to set up a syllabus to hand out to students. The schedule of course topics must be prepared to include all the topics to be taught to the subjects of the study.

Four basic skills are the focus of the current study in addition to the translation as a skill to be taught. Teaching the proposed syllabus lasts one course; the first course of the academic year 2022-2023. Basically the major skills are; reading, writing, speaking and listening. The four skills are taught within the proposed syllabus within (12) lectures. The allocated time for each lecture is (90) minutes. As for the component of the suggested syllabus, the syllabus is divided into (6) units. Each unit contains a scientific theme within the students' specialist of the study.

Concerning the method adopted in teaching the proposed scientific syllabus, the researcher adopt a modified version of Content based instruction (CBI). This is a teaching approach that aims to integrates the four basic skills depending on teaching the subject matter (scientific topics). The fundamental aim of the present study is to improve the students' skills and integrate them effectively. The essential goal are to increase and built scientific vocabularies and enhance the students' ability to read and interact with scientific text. The suggested syllabus contains four basic dimensions of language besides the fact that it is built on two important levels namely: recognition and production.

### **- Language Activities**

After setting up the basic goals of the design depending on the needs analysis procedure, there must be a plan for regulating the linguistic components. Lamri (2011) argues that after choosing the relevant material, the teacher needs to devise and arrange the required topics and tasks to achieve the goals of the course (P.121). It is worth mentioning that each unit comprises the four basic skills to be taught to the students. Mainly, each unit contains recognition and production levels.

As for the recognition level, the course begins with reading comprehension passage within the domain of the students' study (scientific study). The passage is followed with a list for the basic terms found in the text. The most difficult concepts are translated into Arabic to clarify them and avoid any ambiguity.

The exercises which follow the reading comprehension passage are prepared to check and enhance the recognition level of the students. The important point to be stated here is that each item (stem) in the question is delivered to investigate specific ability, for example there are specific question aim at investigating the synonyms of the words and the opposite meaning. Furthermore, reading comprehension strategies and skills are investigated

through exposing the students to skim, scan, looking for the main idea of the passage, etc.

The second component of the proposed syllabus is writing. It is important to state that writing is considered one of the essential component of the language skills. The exercises of this linguistic component are based on writing the best title that best represent the reading comprehension passage. Also, translating phrases from English into Arabic besides writing the main idea of the given passage. The aim is to prepare students to write academic topics within their domain effectively.

The third component of the proposed syllabus is listening comprehension. This skill is believed to be complex, receptive skill in the sense that there is a hidden activity in receiving topics. Schmitt (2010) proposes that listening as a language component is not seen as a single process, it contains a group of related processes, among them; recognizing the sound of the speaker, perception of the patterns of sounds and intonation and finally interpretation to what is said by the speaker (P.180). In the current study this language activity is realized through a tape recorder for a conversation between people and the students are supposed to listen to the record and then answer the question that follow the tape. The aim of listening

to the tape is to investigate the underlying knowledge. The topics of the tape recorder are authentic, short and interesting in the sense that they represent the daily-life situations using simple language.

Finally, speaking component represent an essential part in the daily life in that , it can support other skills. Due to its importance, it represent a great challenge to syllabus designers as well as teachers. Speaking has usually been compared to writing, both are considered "productive skills", as opposed to the "receptive skills" of reading and listening. In addition, speaking needs that learners recognize when, why, and in what ways to produce language (Harmer, 2001:269-270). Speaking also is strictly related to listening as two interrelated ways of realizing communication. Success in learning a language is measured through the learners' ability to carry out a conversation in the (target) language effectively.

In addition to the four basic language component, the current design comprises grammatical activities. Grammar has been an essential issue in teaching and learning process. The place of grammar as an important component of language in second/foreign language teaching and learning is debatable. Before the initiation of the communicative approach in language teaching, teaching grammar is

realized through teaching structures. The focus was on teaching explicit grammar and teaching grammar was based on teaching drills. The format of the lessons was grounded on (Presentation-Practice-Production). After the appearance of the communicative approach in the arena of language teaching, the focus shifted to fluency activities and interactive group work (Richards, 2008:35). Concerning teaching grammar using CBI which is in turn based on communicative approach, the focus on grammar is seen as minor compared to other methods and approaches in teaching grammar. Shmitt (2010:31) states that thinking in lexicon grammar rather than only in morphology and syntax should be emphasized. Due to its importance in the process of teaching, the researcher introduces this component within the text exercises in addition to other activities which enhance critical thinking at the end of each unit. Activities of critical thinking are of many types in terms of its content, some of them focus on word relation, pronunciation besides grammar. Finally it is important to say that the component of one unit is replicated in the rest units but with different realizations, application and management. The final version of the suggested course is shown in appendix (8).

#### **- Validity of the Designed Course:**

Validity is seen as a very important notion in any research. Hall (1993:59) defines the concept validity stating that “validity means the extent to which the test measures what is supposed to measure; the test’s degree of success and accuracy in measuring what is supposed to measure”. Validity means how well the collected data covers the actual space of investigation. It fundamentally means measuring the behavior or quality it is intended to measure. To regulate the validity of the measuring instrument, different kinds of validity have been recommended in the literature they can be stated as follows: Construct Validity, Face Validity and Content Validity.

#### **Face Validity**

Face validity is a subjective judgment based on the researcher's observation, feelings, opinion, thoughts, and intuition about the functioning of the measuring tool. To assess face validity, it can be performed by expert staff or by academic staff on the structure the measuring instrument is trying to determine. Hughes (1989:33) states that “the test is said to have face validity if it accounts for all the required skills and linguistic items which are supposed to be measured”

It is worth mentioning that to ensure face and content validity of this study, the test items of the current study have been presented to jury members who are specialist in the field of Applied Linguistics and TEFL from different universities in Iraq: the University of Mosul/ college of Arts, college of Basic Education The University of Tikrit, Nawroz University, University of AL-Hamdaniya, University of Baghdad. Kindly, the jury members have checked the test items and their relevance to the content of the study and they judge its adequacy. They give valuable modifications and the required suggestions. The researcher Analyzed the comments and the notes of the jurors to ensure the face validity of the test. Finally, all the items of the test have been approved for the current study by the jury members to be valid, relevant and appropriate.

### **Content Validity**

The concept content validity refers to the usefulness and depth of test content. Content validity means “how far the test reveals the syllabus content, and if it can be successfully used for the purpose and measurement aimed at” (Golafshani,2003:599). In other words, it reflects the qualitative form of validity in the sense that it assesses whether the terms contained in the measuring tool represent

the phenomenon under investigation. It means to what extent the items of the test can sufficiently serve the purpose of the investigation. In order to ensure content validity, there must be connection between the items of the test and the subject-related tasks and whether the test content is relevant to the field of the study and comprehensive in its manner.

In the same vein, Shrock and Coscarelli (2008:197) pinpoint that the concept content validity indicates having a number of judges as jury members who are experts in the subject matter to examine the test and decide whether it is appropriate and it is in the line of the objectives set by the researcher.

Considering all the above points , and aiming to set up such type of validity, the content validity of this study is guaranteed by ensuring that the items of the test match the material of the study by a group of experienced experts in the domain of Applied Linguistics and EFL field.

The names and the academic status of each expert in addition to the work place are recorded and shown in the appendix ( 2 ).

### **CONCLUSION:**

The researchers designed a supplementary course for second year students of the Dept. of Biology/ College

of Pure Sciences/ University of Mosul. The suggested course comprises 12 units. Each unit includes multiple language activities. The designed course should be taught through an academic year for two semesters. The researchers hope to implement the course to see its pedagogical benefits.

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## Unit One

**Read the following passage carefully then answer the questions that follow it**

The study of living things and their vital processes is known as “Biology”. It deals with all the physicochemical aspects of life. The modern trend toward cross-disciplinary research and the mixture of scientific knowledge and analysis from different fields has resulted in a significant overlap of the field of biology with other scientific disciplines. Recent values of other aspects chemistry, medicine, and physics, for instance are combined with those of biology in areas such as biochemistry, biomedicine, and biophysics. Biology is known as a branch of science which studies the living *organisms* and their dynamic processes. This science includes many **fields**, among them; botany, conservation, *ecology*, evolution, *genetics*, marine biology, *medicine*. It tackles the processes of **interactions** among organisms and their biophysical environment, microbiology, molecular biology, physiology, and zoology.

As a special field of science, biology helps us understand the living world and the ways which make numerous **species** (including humans) function, **evolve**, and **cooperate**. **Developments** in many fields such as medicine, agriculture, biotechnology, and many other areas of biology have brought developments in the quality of our life. Principles such as genetics and evolution bring insight into the past and help to shape the future, and research in ecology and conservation inform us how we can protect this planet's precious biodiversity.

Biology is divided into distinct, separate scientific branches though all the subdivisions are interrelated by basic principles. It is believed to discrete the study of plants (botany) from that of animals (zoology) and the study of the *structure* of creatures (morphology) from that of function (physiology), but it is found that all living things **share common** definite biological *phenomena* for example, various means of reproduction, *cell* division, and the **transmission** of genetic material.

**Basic Terms**

**Organisms**

كائن حي

**Medicine**

علم الطب

**Ecology**

علم البيئة

**Cooperate**

يتعاون

**Share** يشارك

**Species** انواع

**Transmission** انتقال

**Phenomena** ظواهر

Cellية

**Section A- Reading Comprehension**



- 1-Suggest a suitable title for the above passage.
- 2- The second paragraph is about-----
  - A- The definition of the term Biology.
  - B- The branches of Biology as a scientific field.
  - C- Evolution of human beings.
  - D- Principles of Biology.
- 3- the term **biology** in the first paragraph belongs to one of the following definitions.
  - A- Is the study of living things and their vital processes
  - B- It is the field of health and healing.
  - C- It deals with the properties, composition, and structure of elements and compounds, their change, and the energy that is released or absorbed when they change.
  - D- Is the science of energy and matter and how they relate to each other.
- 4- Match the concepts list A with their suitable meanings in list B

List A	List B
1- Fields	A-contact
2- Developments	B-branches
3- Interaction	C-progresses
	D-properties
- 5-The opposite of **common** is-----.

- A-Public
- B-Shared
- C- known
- D-Private

6-Based on the information in paragraph 2 it can be inferred that the term **evolve** belongs to which of the following word group?

A-hypothesis, declaration, affirmation

B-change, maturation, generation

C-unit, tissue, body

D-object, thing, property

7-In paragraph 3 the author introduces ideas about how other fields give insights to the science of biology. How many of these fields dose the author put forth in this paragraph?

A-1

B-2

C-3

D-4

**Section B- Writing**



8-Translate the first ***TWO*** sentences into Arabic.

9-Write the main idea of the passage using your own words.

**Section C- Speaking and Everyday English**

**Talk about yourself**



10-Answer the following questions orally:

A-What are you?

B-In what department?

C-Which branch of Biology do you like?

D-Have you got vaccine of Covid 19?

E-What kind of insects do you like?

11-Match the expressions with their responses :

1-Good night	A-Yes can I help you
2-Hello,I'm John	B-Thank you
3-Excuse me	C-Welcome
4-Bless you	D-Sleep well
5-Have a good weekend	E-Same to you
	F-Nice to meet you

**Section D-Listening:**

**IJRSSH**

**\*Listen to the following dialogue by Steve and Mrs Snell then answer the following questions:**

1-When did Steve move into his new flat?

2-Is it a large flat?



3-What is his job? Is it a good job?

4-Does he work long hours?

5-What does he wear for work?

6-What time did Steve turn off the music?

7-Why doesn't Mrs. Snell want to speak to Steve?

*Think Critically How to acquire scientific concepts?*



To learn the meaning of the new vocabulary , you can use vocabulary cards as valuable tools that contain key elements about the vocabulary item.

Cooperate v. يتعاون

Cooperation n. تعاون

Cooperative adj. متعاون

**IJRSSH**