

# The Effect of The Capability Maturity Model on Organizational Performance: A Field Study in The Centers of Continuing Education in A Sample of Public Universities In Baghdad

By

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## Abstract

The current research aims to identify the effect of the capability maturity model on organizational performance in a sample of continuing education centers in public universities. Based on the novelty of the variables and their importance for centers in universities on the one hand, and society on the other, the applied aspect of this study focused on determining this effect by analyzing the dimensions of the capability maturity model (as an independent variable) on organizational performance (as a dependent variable). For this purpose, a questionnaire was prepared that combines the research variables, consisting of (45) items based on previous standards and models. The questionnaire was distributed to (center director, division directors, unit directors, teachers, employees), and the sample size consisted of (104) individuals out of the total research community of (152). Using Morgan's equation to calculate the sample, (6) questionnaires were retrieved, and the results of the study were reached following a statistical treatment using (SPSS V.28 - AMOS V.26). Through the results obtained for this study, it was found that there is a significant effect of the capability maturity model the on organizational performance.

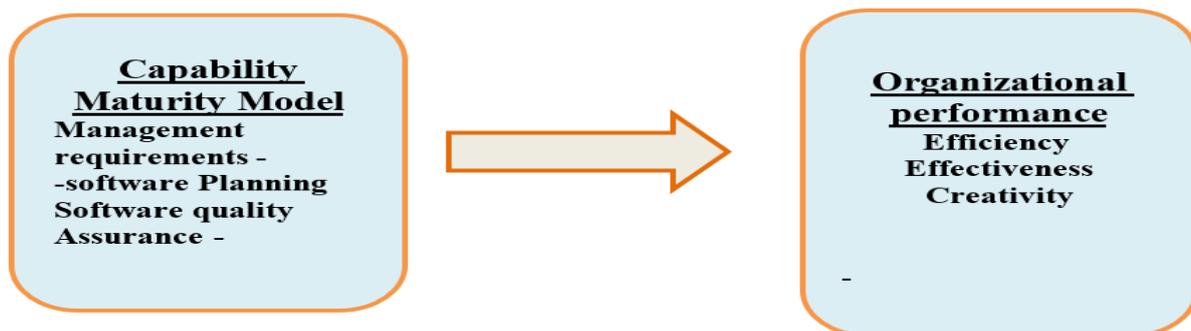
**Keywords:** *capability maturity model, organizational performance.*

## 1. Introduction

People need to interact among them to express their thoughts and feelings. One essential way to achieve this part of this social interaction is through gaining sufficient vocabulary chunks that enable people in general and learners to reach their goals and desires. From another side, another message can be fulfilled through written communication. One needs to have a thorough mastery of how to communicate using the written formula and how can that be developed and improved through adopting new style of vocabulary or lexical chunks instruction in class either explicitly or implicitly teach.

The Capability Maturity Model (CMM), which has begun to be applied in the field of software, is one of the topics that has received wide attention recently in various fields. Many researchers have resorted to developing and adapting it to suit various service and production sectors, including the education sector. It aimed at improving the organization's operations by assessing the current situation and proposing improvement measures. Despite the agreement enjoyed by the various maturity models, there is still a need to provide an integrated maturity model for the information educational process. The sample of research is represented by the

centers of continuing education of a sample of public universities in Baghdad, where this field is considered qualified for such studies. This is in addition to the importance of this sector and the educational and development role of the country, which will be a guide to help educational institutions assess the level of maturity of their capability and raise their maturity to higher levels. It came from the point of view of studying the performance of the workers in the centers and charting a trend to develop the performance of the centers in the future as well as the role in raising the performance of workers within the organization and enabling them to communicate with qualified and experienced people. The importance of research lies in the fact that it is applied in the most important sectors in the country concerned with education and development represented in the centers of continuing education in public universities. It also lies in benefiting the departments of the research centers by informing them of the most important aspects that are focused on the work and performance of the employees in the center and how important it is in reaching the goals. This research enhances the knowledge aspect as it contributes knowledge and benefit to students and researchers, in addition to the aim of research to determine the level of maturity capability in the centers of continuing education, determine the level of organizational performance in the centers of continuous education. For the purpose of achieving the research's objectives, there was a need to formulate a single hypothesis, that there is a statistically significant effect of the capability maturity model on organizational performance, as described in the following chart.



Source: prepared by the researchers

### 1.2. *Research problem*

The problem of field research arises from the fact that most of the Iraqi government universities complain of weakness in determining the level of capabilities of employees and what are the stages of their maturity and what is their impact on the performance in the surveyed centers, and the extent of the available ability to determine the level of maturity, where the capability maturity model is considered as stages of development for workers.

This is reflected in the performance in the researched centers in a different working environment where there are weaknesses represented by the absence of independent possibility of the centers in the use of their material resources and what is reflected on the workers in addition to the shortage of manpower. This generates a deficit that reflects on the overall performance of the center. Thus, the weakness tends towards slow growth, development and adaptation under different environmental conditions.

The capability maturity model plays its role in determining the level of maturity and development in performance in light of the constraints of material resources, functional deficit and the lack of establishing a financial division in the particular organizational structure. The capability maturity model supports the work environment, to achieve a high level of performance in light of the level of maturity and the available capabilities to face complexities, ambiguity and confront fluctuations. From the current study, it can be seen that there is a

weakness in employing the required skills and facing the material challenges and the extent of their reflection on the administrative work environment. On this basis, the researcher's directions came to study the capability maturity model and organizational performance in detail and to search for ways to apply the dimensions of each of them.

The research problem can be summarized in the following questions: What is the level of application and interest of the surveyed continuing education centers in the capability maturity model, and which dimensions are more important? Does the capability maturity model influence organizational performance?

### **1.3. Previous studies**

1) A Capability Maturity Model for Scientific Data Management: Evidence from the Literature.

The community investigated in this study was the University of Syracuse, New York. The study aimed to develop a similar path for improving scientific data management, the model described the key process areas and practices needed to achieve effective institutionalization at all levels of the model. The most prominent results of the study are the analysis of a large number of key practices of the SDM program, a number of which appear to be specific practices of the SDM program.

2) A capability availability model for digital investigations study

The study population was composed of three organizations, and the country of the study (USA). This study aimed to investigate the successful application of the Digital Investigation Capability Maturity Model (DI-CMM) to other process areas and it was developed into a framework for process improvement models known as Capability Maturity Model Integration or CMMI. This study proposes the Digital Investigation Capability Maturity Model (DI-CMM) as a tool for analyzing an organization's digital investigation capability. The outcome of the study is that the methodology is applied to a selection of real-world organizations and their current capabilities in terms of digital investigation are objectively assessed using DI-CMM. The result is then compared with the organizations' self-assessment of their ability to conduct digital investigations.

3) Untangling the influence of organizational compatibility on green supply chain management efforts to boost organizational performance through information technology capabilities

The country of the study (China), and the study aimed at determining the impact of organizational compatibility on the efforts of Green Supply Chain Management (GSCM) organizational performance. The results also indicate that IT capabilities are the main mediator influencing the correlation between GSCM efforts and organizational performance.

## **2. The theoretical Aspect**

1. Capability Maturity Model: this is broadly based on a process improvement approach. This in turn relies on on a process model. This model, which is developed by the American research and development center SEI, is employed in assessing an organization using a five-level process maturity scale (Team, 2010). Each level classifies an organization according to its operation standards pertaining to the subject area under scrutiny. In order to treat improvement, this model has an integrated that can, at the same time, help in alleviating redundancy and complexity and lowering cost (Kaur, 2014).

To compare 9000ISO and CMM in general, both of them can handle the same issues and share an interest in terms of managing quality and process. However, each framework hails from a rather distinct origin. ISO concerns with the relationship of the customer with the supplier, in an effort to reduce the customer's risk in choosing the supplier. In contrast, the strength of CMM is the concern over the software supplier to improve its internal processes to achieve a high quality product for the benefit of the customer. The main difference between the two systems lies in their respective purposes: ISO 9001 specifies a minimum acceptable quality level for software operations, while CMM establishes a framework for continuous process improvement. The differences between CMM and ISO are shown in the following table (Sun & Lin, 2021; Zhou, 2021; Zhuoyuan, 2021).

**Table 1.** *The comparison between the Capability Maturity Model and 9000ISO*

<b>Capability Maturity Model CMM is specifically for the industry</b>	<b>ISO9000 Applicable to any kind of industry.</b>
. Gets the technical side of engineering Software CMM	commercial processing companies ISO 9000 titles
It suggests how to meet the requirements.	ISO 9000 specifies the minimum requirements
Provides process maturity.	ISO 9000 is shorter than required
CMM has five levels: 1. Initial Level 2. Repeatable	saves 9,000ISO
Level 3. Defined Level · 4. Managed Level 5. Optimizing	Success or failure criteria.
ISO 9000 1 in CMM, operations are not included	. It has no ISO9000 levels
Project tracking Process and Technology Change	Some process items in CMM are not included
Management Coordination between groups to meet customer requirements. Organization-wide process focus, process development and integrated management	Purchase management Supplying customers
Reconnects the mechanism of progression step by step through successive levels of maturity.	Do not specify ISO 9000 Steps required to create a sequence quality system

Zubrow et al., (Zubrow et al., 1994) defined it as a process improvement approach developed in software development, used to evaluate organizations against a five-level measure of process maturity, describing each level of the organization as standardized to processes in the subject area to be evaluated, providing an integrated approach to improving the process while reducing redundancy, cost and complexity.

### **2.1. Requirements management**

The Capability Maturity Model indicates that the purpose of requirements management is to manage requirements for project products and components and to ensure alignment between those requirements, project plans and business products (Khan et al., 2013).

-Software planning: it is to develop reasonable plans for performing software engineering and software project management activities. Software planning involves developing estimates of the work to be performed, defining necessary actions, and defining a plan for performing the work (Kuhn et al., 2010).

-Software Quality Assurance: this is to provide management with the appropriate vision

of the process used by the project program and the products being built, ensuring the quality of the programs includes reviewing and scrutinizing software products and activities to verify their compliance with applicable procedures and standards and providing the project program and other appropriate managers with the results of these audits (Laporte & April, 2018).

## **2.2. *organizational performance***

This is one of the concepts that have received considerable attention of the researchers and studies in society. This is because it reflects the mechanism of thinking shared between the organization and individuals with the aim of achieving common goals, and this is in line with the innate human orientation towards collective actions as a fundamental necessity in life. Studies began an attempt to reach a comprehensive explanation of the performance in various developments and disciplines with the aim of achieving efficiency, effectiveness and creativity that express the ideas and realities of the organization and what it aspires to.

The performance was defined as the image that truly reflects the progress of the work in the organization with the aim of achieving the efficiency, effectiveness and creativity that the organization aspires to achieve (Elena-Iuliana & Maria, 2016). It is an integrated system of business results in the organization in light of its interaction with elements of the internal and external environment, the work carried out in accordance with regulations and standards, and the way these works are provided to the client to achieve the required service (Tuama & Alqhiwi, 2014).

The researcher believes that it is the product of the efforts of the individuals working in the organization expressing the ability of the organization to achieve outputs through the performance of the workers. These are represented by good implementation, experience and technical skill desired in the work and effective communication in all sections of the organization as well as compliance with the laws that regulate the work more efficiently and effectively.

- 1) A: Effectiveness by doing the right things i. e. the work activities performed by the organization to reach its goals. Thus, organizations seek to be effective in achieving their goals, by performing their tasks at the desired level (Shahzad et al., 2020).
- 2) B: Efficiency is a relationship between inputs and outputs by accomplishing as little as possible (Bartuševičienė & Šakalytė, 2013).
- 3) ,C: Creativity is regarded as a process on which the emergence of an idea, practice product, or new service can be exercised by employees of organizations, or imposed on them by senior management.

It therefore generates some kind of change in the business environment or the output of organizations (Lam, 2004).

## **3. The Practical Aspect**

### **3.1. *Research community and sample***

The research community is represented by a sample of continuing education centers in public universities, while the research sample was represented by a total of (152) employees in the centers of various divisions and departments. A random sample of (104) employees was withdrawn according to Krejcie & Morgan (Krejcie & Morgan, 1970) chart dedicated to indicating the number of samples relative to the study community.

The researcher used the random sampling as a method of collecting data from the research community (a sample of continuing education centers), to achieve accuracy in the results. The research community composed of (education centers in a sample of public universities). The centers were determined on the basis of the increasing development in the level of education and training growing in light of the services provided. The number of selected centers was (5) centers in public universities.

**Table 2.** *Description of the research sample, the number of forms distributed and received, and the percentage of recovery*

The sample	Number of forms received	The number of forms distributed	Recovery rate%
A number of continuing education centers in a sample of public universities	104	110	94%

### 3.2. *Stability of the scale using (Cronbach's alpha*

Cronbach's alpha estimates the reliability of tool responses (questionnaire) assessed by topics indicating tool stability. Cronbach's alpha value ranges from zero to one with higher values indicating that the elements measure the same dimension. In contrast, if Cronbach's alpha value is low (near 0), it means that some or all elements are not measured in the same dimension. There can also be negative numbers, where the negative number indicates an error in the data. The accepted values of Cronbach's alpha are 0.60 and above good (Schrepp, 2020). Table (3) shows the stability test of research variables for the dimensions of the capability maturity model and organizational performance.

**Table 3.** *Testing the stability and consistency of the research scale using the Alpha Cronbach test*

Variable	Cronbach's alpha coefficient of the variable
requirements management	0.779
Software layout	0.857
Software Quality Assurance	0.865
Capability Maturity Model	0.936
X	
efficiency	0.866
potency	0.873
creativity	0.856
organizational performance	0.933
Y	

Source: Prepared by the researchers based on SPSS-28 outputs.

### 3.3. *Description of sample properties*

This axis seeks to clarify the most important characteristics of the research sample members in the research organization, through the information included in the questionnaire that was distributed to them, and the following is a brief description of the research sample members.

From the results in Table (4), the researcher explains the demographic characteristics as follows:

- 4) **Sample by gender.** It is clear that the percentage of males was (43.3%) and the

number of observations was (45) out of the total sample of the research (104). The percentage of females was (56.7%) and with a frequency of (59), as the work force of the continuing education centers consists of males and females in a relatively close manner. These centers depend on them in job positions and this indicates that the centers of continuing education are based on assigning the tasks of people and units to females at the expense of males.

5) ***The sample according to their age groups:*** The ages of the research sample show a homogeneous work capability in the centers of continuing education. It is clear that the percentage of ages ranging (40->50) is in the first place with a percentage of (36.5%), and with a number of (38) views. The age group (30->40) came second with a rate of (34.6%), with a number of (36) views, while the age group (above 50 years old) ranked third with a rate of (17.3%), and with a frequency of (18) views. This was followed by the age group (below 30 years old) in the fourth place with a rate of (11.5%) and a frequency of (12). Thus, this diversity reflects the retention of centres in experienced age groups, indicating the mixing of experiences and the exchange of information and skills within the competence.

**Table 4.** *The demographic characteristics of the sample*

	<b>Variable</b>	<b>Category distribution</b>	<b>Number</b>	<b>Percentage</b>
1	Gender	Male	45	43.3
		Female	59	56.7
		Total	104	% 100
2	Age categories	Less than 30	12	11.5
		>30-40	36	34.6
		>40 -50	38	36.5
		≥50	18	17.3
		% 100	170	Total

Prepared by the researchers

#### **4. Analyzing the influence relationship between the research variables**

We seek to test the impact hypotheses identified by the research. For the purpose of determining the possibility of accepting or rejecting it, it will depend on the regression analysis equation to estimate the parameters of the model. When the relationship in the statistical model is between one independent variable and a dependent variable, then this model is the simplest regression model and is called the simple linear regression model. As for the estimates of these values and statistical indicators, they were calculated at the level of the research sample of (104) for a sample of (continuing education centers in public universities). The levels of effect were analyzed between the independent variable Capability Maturity Model and the dependent variable (organizational performance) as will be shown next. The statistical indicators shown in Table (5) were used to show the results of the research hypothesis test, which stated (there is a statistically significant effect of the Capability Maturity Model on organizational performance).

1)  $Y = a + B_1 X_1$

2)  $Y = 0.498 + 0.880 X_1$

The table displays the results of the simple linear regression analysis of the effect of the capability maturity model on organizational performance. It can be noted that the (t) value calculated between the capability maturity model and organizational performance was (214,618). This value is greater than the tabular (F) value of (5.18) at the significance level of

(0.05). Accordingly, we reject the null hypothesis and accept the alternative hypothesis, which states (there is a statistically significant effect of the capability maturity model on organizational performance). This contributes to exploiting the available resources through what is drawn up from a development plan for the center's performance and refining the skills and knowledge. This in turn helps to perform the roles and activities entrusted to the individual with a high capability, which is reflected on the overall performance in the center.

Through the value of the coefficient of determination (R<sup>2</sup>) of (0.678), it is clear that the capability maturity model explains some (67.8%) of the variables that occur on organizational performance. The remaining percentage (32.2%) refers to other variables that are not included in the research model. Through the value of the marginal slope (B) of (880), it appears that the increase in the use of the capability maturity model by one unit will lead to an increase in organizational performance by (88%), as the calculated (t) value of the marginal slope coefficient of the capability maturity model reached (14.650). This value is greater than the tabular t value of (1.98) at the level of significance of (0.05). This indicates the significance of the marginal slope of the capability model variable, and the value of the fixed limit was recorded in the equation (0.498). This means that when the capability maturity model is equal to one, the organizational performance will not be less than this value.

**Table 5.** Analysis of the dimensions of the capability maturity model in organizational performance

Capability Maturity Model	dependent variable	Calculated T-value	Calculated F-value	The coefficient of determination (R <sup>2</sup> )	The value of the marginal slope coefficient (B)	fixed limit value (a)	sig	Indication
Capability Maturity Model	organizational performance	14.650	214.618	0.678	0.880	0.498	0.001	Significant

1.98t tabular 5.18f Tabular Sample size = 104

Prepared by the researchers based on the program spss.v 28

## 5. Conclusions

This research resulted in some key conclusions on the theoretical and practical aspects, which embody the final results of the intellectual and cognitive pillars that explained what was reached by the researcher. This can be clarified as follows:

- 1) The results of the research showed that there is an interest by most of the surveyed centers in providing work requirements according to the needs of all the center's facilities, according to the principle that providing work requirements leads to achieving a distinguished organizational performance.
- 2) It was found through the research that there is a continuous follow-up by the management of the center for the performance of the teachers (training staff) and the workers and the level of achievement obtained to avoid a performance gap. This is reflected in the level of work and the performance of the participants in the work. It was found that there is an evaluation form filled out by the participants in after the completion of the course to indicate their assessment of the training staff, the course curriculum in general, the extent of benefit and the availability of an appropriate training environment for conducting the course.

## 6. Recommendations

- 1) The necessity of increasing support in achieving the work requirements of the centers that appeared positive. As for the centers that did not achieve the required interest in providing work requirements, it is necessary to approach the presidency of the university to obtain funds to meet the centers' necessary needs and requirements as centers have self-income up to more than one hundred million dinars annually or more. This can be done by filling out the special needs form, approaching the Finance Department and obtaining the required approval, to ensure the required workflow.
- 2) The need to strengthen communication with participants and take complaints and suggestions and consider them as a feedback to the researched centers and benefit from them in solving problems and enhancing the positive aspects by taking into account the proposals put forward.

reading their English schoolbooks. The central motivation for intermediate learners who have not the ability to read systematically is their restricted vocabulary repertoire. To simplify the acquisition procedure for those learners, a profound comprehension of lexical items is fundamental. Moreover, some topics relevant to the enhancement in learners' vocabulary repertoire are correspondingly stated.

### **6.1 *The Statement of the Problem***

Teaching English descriptive paragraph writing at the third year in the Department of English, University of Al-Imam Al-Kadhumi is still form-based method. The students need new strategies to produce an effective and academic piece of writing a descriptive paragraph. They face a big challenge specifically in two main areas: preparing and organizing supporting sentences for the topic sentence that could be reason of lack of sufficient vocabulary that hinder the process of written communication and in providing various human sense-based words, etc.

### **6.2 *The Aim of the Study***

The study aims at examining the influence of vocabulary on the achievement intermediate learners of English department in writing academic descriptive paragraphs.

### **6.3 *The Significance of the Study***

The position of the current study arises from the principle that vocabulary repertoire influences the way learners acquire and communicate using language. It expedites the progression of attainment of an effective and academic descriptive paragraph and boosts the written communication.

### **6.4 *Hypothesis***

The researcher suggests a null hypothesis, it shows that no statistical differences in the pretest and posttest between EG and CG.

### **6.5 *Questions of the Study***

The following questions have been presumed.

- 1) Does vocabulary repertoire have any important role on Iraqi intermediate learners' descriptive paragraph?
- 2) After the treatment being applied, is there any differences between the EG and the CG in their mean score?

## **2. The Vocabulary-Based Approach**

Language learning can possibly refer to a process of creative thinking in case it involves certain types of communicative tasks such as vocabulary learning activities and building up

reading strategies, etc. so to have a complete sight of the scene on how language learning specifically how vocabulary or lexical items can be acquired, it is necessary to see deeply this process; to comprehend and yield chunks of the words all together. Language chunks constitute the unique statistics of how individuals recognize the form. Lexical approach or vocabulary-based approach highlights that language learners can use the language in chunks (Johnson, 2009: 1).

The lexical method used is public and a mode of teaching a FL created by Michael Lewis in the 1990s. The lexical approach has lately recognized as one indispensable methodology that can be applied in place of form based. Its emphases on cultivating learners' capacity through gaining lexis or chunks; a blending of words that harmonize or it can be

named grammatical lexis. Its central code is that in case learning a language, learner is able to comprehend and crop grammatical lexis or chunks, since such chunks form the primary premise of a language. (Abdulqader, Murad, & Abdulghani, 2017; Amores).

### **3. Written Communication**

Nystrand (1983) define the concept of written communication as transfer of messages through printed words and can occur through various forms of communication such as letters, memos, circulars, reports, notices, etc. Learners need to communicate well and transfer their knowledge and interests to the external world. To write communicatively and academically, they first must gain a large amount of vocabulary repertoire; namely, lexical chunks vocabulary that occupies a special status in English language for they have a language eloquence and rhetoric style of writing. Collocational competence is the ability to use vocabulary in the advanced level and becoming a proficient learner in both spoken and written communication since vocabulary is one essential component of language learning. Henceforth, learners need to get acquainted and exposed to useful practices and rehearsal to be familiar with many vocabulary chunks through which they can develop their lexical skills and eventually write academic descriptive paragraphs proficiently.

#### **6.6 3.1 Principles of the Vocabulary Chunks Teaching**

Song and Chen (2017) categorizes the following principles of the vocabulary lexical units:

- 1) Language basically encompasses grammatical lexis, not lexicalized grammar. i.e.,
- 2) what constitutes language is grammatical lexis rather than lexicalized grammar; focus should be on vocabulary-based instruction, since it is considered one part of oral or written communication; though here in our case, we need to focus on written communication such as teaching and learning academic descriptive paragraph through those lexical chunks acquisition.
- 3) Its main aim is to concentrate on function-based teaching, not structure learning.
- 4) The categorization of vocabulary repertoire and grammar is somehow unsound. English language, in principle, comprises of grammatical lexis; lexical items or vocabulary that person needs to contact and interact socially in different life situations.
- 5) It focuses mainly on how learners form new chunks of language to constitute new ways of creating novel utterances and becomes easily fluent and communicate variously.
- 6) Lexical competency is one crucial constituent of assimilating language attainment.
- 7) Curricula selection and progression should be built from computational linguistics and discourse analysis.

- 8) The emphasis should be on grammaticalized lexis rather than lexicalized grammar.
- 9) The weight of importance should be on the process of activating critical thinking in relation to mental or cognitive processes of human mind through engaging learners in different contexts of practices of written communications.
- 10) Inactive skills, primarily listening, are necessary to get improved in relation to their position.

### **6.7 Taxonomy of Vocabulary Chunks**

[Leone and Di Caro \(2020\)](#) and [Juel and Minden-Cupp \(2000\)](#) maintain that vocabulary chunks are categorized into four sorts:

### **6.8 Polywords**

Fixed phrases comprised of more than a word can be either a distinctive construction of the English-type description, such as *a loaf of bread*, *a piece of chocolate* etc., or an atypical formula like *as you might say*, *overall*, etc.

### **6.9 Institutionalized Expressions**

It takes many forms such as oral communication, fixed or semi-fixed form, fixed blending of functional content of words, or full utterances; it can be fixed form at the opening of the sentence as well, comprising proverbs, aphorisms, and social formula expressions, such as *How are you?* *some time ago*, *to inaugurate with*, and *so on*.

### **6.10 Phrasal constraints**

It denotes a phrase structure organized by some fixed words, like, *a ... ago*, which can make the phrase *a couple of days ago* / *some time ago*; *the ...-er* construction that can produce *the sooner, the better*.

### **6.11 Sentence builders**

Regarding discourse coherence and cohesion, it is used primarily in written forms of language structure. It is in the formula of fixed or semi-fixed expressions with syntactic structures, suitable words or clauses can be supplementary as required, for instance, *"It is commonly approved that ..."*, *"There is no doubt that ..."*

As can be realized from the directly above sorting, the formula of vocabulary chunks, dissimilar from the idiomatic expressions, is unrestricted. On the contrary, idioms are fixed terms, whose formulas occasionally alter, and the implication can scarcely be predicted from the distinct words. In college textbooks, English set phrase or idioms or vocabulary chunks or phrases are typically itemized as fixed lexis for learners to gain, whereas the vocabulary chunks, due to the free mixture and the huge records, are not once considered. Besides, the vocabulary chunks show a correlation between writing academic descriptive paragraph and learners' motivation; when learners gain so much vocabulary chunks; they can express and describe senses and reality or objects in professional way after they have acquired paragraph organization from their tutor or instructor. As [Glosser and Deser \(1992\)](#) such approach "it helps to communicate and apply on writing".

### **6.12 Utilities of Vocabulary Chunks Approach**

Concerning the function and pragmatism of lexical chunks in language teaching, it can be divided into three categories as [Xu and Cai \(2021\)](#) state that lexical chunks can be classified into three central kinds: social interactions, necessary topics and discourse device.

- 1) Social interactions: vocabulary that make learners perform better in social

- collaboration and they may explicate themselves superior in exchanges.
- 2) Necessary topics: such kinds of division can be seen in various ordinary life speech dialogues.
  - 3) Discourse devices: lexical or vocabulary items can be grouped altogether to form new texts that are understandable in different social situations.

### **6.13 The Process of Teaching Academic Descriptive Paragraph Writing**

The vocabulary-based approach certifies the significance of teaching lexical units on learners' improvement. The applicability of using such approach is confirmed to develop learners' writing Allagui (2021). Singleton and Leśniewska (2021) claim that a praiseworthy elucidation is that native speakers of English language use ordinary language frequently rather than making new grammatical forms or functions. In other words, native speakers

endure using the most recurring grammatical lexis. For this goal, teachers can assume four leading steps in teaching writing academic descriptive paragraph. Step one is to have their learners identify, form, and use lexical chunks appropriately. As well as that, the learners should be armed with tasks that surge their consciousness and comprehension and they will recognize that main stem is that whichever prevailing language essentially of off-the-rack vocabulary items. Step two, it can initiate with text analysis. The learners are armed with writing documents to recite and examine or analyze texts. Just then they are interrogated to identify the miscellaneous types of vocabulary items. Step three, the learners are requested to write a fluent academic descriptive paragraph by means of analogous chunks that teacher have practiced them. As a final point, the learners' realization is recorded and measured. Benefits of vocabulary-based approach in raising learners' fluency of writing academic descriptive paragraph can be as follows

- 1) Reinforce the fluency of writing efficiently and fluent descriptive paragraphs,
- 2) Progress the genuineness and factuality of learners' writing ability,
- 3) Build up structural ability of text discourse: coherence and cohesion aspects.

## **4.1 Data Collection Methods**

### **6.14 Method**

The research design is going to be experimental one to correspond with the study aims and questions. To implement this procedure, two groups (EG and CG) design was assumed for the present investigational study. The researcher deliberately selects Test of English as a Foreign Language (TOEFL) as an instrument of capacity for their ability in English descriptive paragraph writing, the learners were haphazardly assigned into two groups (EG and CG). The EG was taught using vocabulary-based approach. Throughout the treatment the EG benefits from vocabulary development and write plentiful united paragraphs about disparate matters and later learners showed what they have educated and contributed with their classmates. They were requested to make use of the treatment steps in upgrading their level in their paragraph abilities. The learners in the CG did not have any treatment. They only had the teaching found in the prescribed textbook.

### **6.15 Participants**

In the present-day study the third-year sample of Imam Al-Kadhumi University College (IKC) in Misan were designated. At that time 80 learners were nominated arbitrarily. Then and there they were dispersed into two main groups (EG and CG). Every group has 40 students.

### **6.16 Instrumentation**

The instrument of the modern study was QPT (Quick Proficiency Test), a kind of test that expects to know the learners' ability to distinguish and yield lexical competence, containing two parts, that was aimed to homogenize the learners and to know their performance accurately. The first part included 40 questions for the second one 20 questions.

The second instrument was a test of vocabulary repertoire that was assumed as the pre-test and post-test. It contained 20 MCIs and was given to the whole sample in the existing study with the scores from 0 to 30. The researcher chooses "English Collocations in Use" book, written by Michael McCarthy and Felicity O'Dell.

### **6.17 Procedure**

The aim of the recent study is to measure the impact of lexical competence on intermediate learners. To this goal, the 80 sample were questioned using QPT (Quick Placement Test). This type of measurement has 30 vocabulary items. 80 learners have submitted to this test. 50 minutes are the selected time to finish the exam. This placement exam anticipates quantifying students' up-to-date performance. Afterward, 40 learners are picked out of 80 learners. They are divided into two groups (EG and CG), every group is 40 learners. Both the EG and CG are pretested. To apply that, all the learners are separated into two pre-tests, containing a test of collocation and interview. A 20-item collocation test is assumed to all learners. The learners have 20 minutes to answer. They are questioned to fill in the gaps with the correct collocations. Well along all the learners partake in an interview of 10 questions. The questions take each learner 15 minutes to reply. After the pre-test, the learners in the EG are taken a treatment. The EG are educated consistent with the collocations in use with furthestmost communal lexical items on varied topics to enhance their ability in writing descriptive paragraphs.

In every lesson, the learners are taken a group of vocabulary chunks that are related to topics on writing academic descriptive paragraph, and they brainstorm between them after they have been grouped and they have approximately ten lexical chunks and practice them well. The EG are queried to highlight the vocabulary chunks that relate to human senses such as sight, feeling, taste, touch and hear and connect such vocabulary chunks or idioms to writing to have a clear and academic piece of writing that appeal to their instructor and aims of the present study. Later, they must apply them in realistic texting to store and retain them in a better manner. All units of the book (Collocations in Use, written by Michael McCarthy and Felicity O'Dell) embrace vocabulary chunks mainly two-word verb phrases, adjective+noun groupings and most common idioms learners can escalate the amount of vocabulary repertoire. Likewise in all lessons, the learners are taken selected important subjects in each module and at that time they are asked to practice the vocabulary chunks trainings by forming example sentences and academic descriptive paragraphs beforehand from the vocabulary chunks they have previously got. Moreover, the researcher probes learners to sort out the drills which are the next sheet of paper of the similar subjects in the entity. Afterwards the EG have been gained the noteworthy, designated vocabulary chunks, learners are requested to read the instructions well and accentuate the connected words and expressions and use them cautiously in actual sentences. In the subsequent lesson the researcher scan to the following unit to explain. He makes arm-up practice by questioning certain learners the subjects they have gained earlier. The prominence and usefulness of the matters of the units are the standards the researcher counts on when assorting units to explain. Conversely the CG is individually asked to study the recommended textbook texts, College Writing, to produce well-written academic descriptive paragraphs. Next the completion of eight weeks, the learners in both groups have post-tested in to check their progress in academic descriptive paragraph writing ability. In the test information, the learners are necessary to write down their thoughts on six dominant topics they may meet in actual life

circumstances. When recording the learners' post-test, the researcher concentrates chiefly on the writing fluency of academic descriptive paragraphs in terms of advanced vocabulary selection and professional use of collocational competence related to lexical chunks arrangement that suit academic level and well-organized paragraphs in terms of coherence (meaning) and cohesion (language structure ties) and spatial order signals that denotes connectors and some essential adverbs and paragraph unity.

## 4.2 Findings

### 6.18 4.5.1 Results and Discussions of the Pre-test

As demonstrated in Table 1, the mean score of EG is 52.61, while the mean score of the CG is 52.42. The calculated t-value is established to be 1.20 at 98 degrees of freedom and

0.05 level of significance, which shows that there is no statistically significant difference between the attainments of the two groups in the pre-test. This approves that the applicants allocated to EG, and CG are not originally different but equal in writing descriptive paragraph ability.

**Table 1** *The Writing Performance of students on the Pre-test*

Group	No. of students	Mean score	Standard Deviation	DF	t-value		Level of Significance
					Calculated	Tabulated	
CG	40	52.61	10.598				
EG	40	52.42	11.684	98	1.20	1.987	0.05

### 4.5.2 Results and Discussions of the Post-test

After the treatment and the experiment has been done, the researcher made a post-test to see whether significant differences occur between the EC and CC. The following table displays the significant differences between the two groups in their writing descriptive paragraph ability achievement.

**Table 2** *Comparison between the Writing Descriptive paragraph of EG and CG on the Post-test*

Group	No. of students	Mean	Standard Deviation	DF	T-Value		Level of significance
					Calculated	tabulated	
CG	40	52.89	9.53	98	Calculated	tabulated	0.05
EG	40	60.31	10.31		5.8	2.6	

It might possibly assume, as stated by data from table 2, that the difference performed in the learners' post-test. To authenticate the test, with their S.D. as 10.31 (EG) and 9.53 (CG) correspondingly, the EG catches the mean of 60.31 more than that (52.89) of the CG. According to the above table, it can be recognized that it was vivid that in the post-test both CG and EG have got the higher mean score than that in the pretest, which indicates that both groups made a performance in their writing test. Nonetheless, the learners in the CG upgraded not as better as the learners in the EG. The learners in EG, after they have been taught using the selected unit contents by the researcher, upgraded by increasing 10.125 points. In the post-test, the mean scores in the EG are much higher than those of CG, which means that the former improved a lot more than the latter. The result shows that in the post-test, the performance of the test in EG is better than that in CG.

According to the T-test for comparison in post-test is shown in Table 2, there exists a significant difference between CG and EG. Consequently, it can be decided that there exists a

significant difference between two groups.

These findings of the study indicate that using lexical chunk instruction in class increase the students' vocabulary knowledge when they want to express their idea or thoughts since they have a large amount of lexicon or word repertoire. This will reflect clearly in their writing fluency, as post-test proves that. Along with the test items analysis, the researcher pays more consideration to the students' use of lexical chunks in real life conversation. It is

proven after that analysis of the results of the current study that lexical chunks teaching aid EG to use English fluently and appropriately. As well, the processes of input of lexical chunks unable the students to avoid errors come as a consequential from vocabulary lists selection, thus depending on such technique in teaching writing refines the accuracy of language wiring.

## **Discussion**

The current study and its outcomes signpost that the solicitation of vocabulary-based approach mends their writing ability as happened in their post-test rather than the CG who was taught according to the prescribed textbook. Voluminous activities have been applied by the researcher when teaching writing according to vocabulary-based approach; words related to spatial order signals, academic vocabulary (according to CEFR levels of language learners) and transitions words that transform from one idea into another.

Throughout the conduct of the treatment of applying the approach being adopted by the researcher in the present study, the EG made use of phrases, idiomatic expressions, fixed expressions, and collocations and put them in progress of their writings performance when they practice these lexical units then applying them in actual writing process. Teaching learners a variety of vocabulary repertoire may make learners good thinker to some extent; they can express themselves in different life situations in written communication and also, they become independent and autonomous. Far along, they argue the themes and matters and collect information and brainstorm with their classmates; this technique brings active participation and continuous commitment on the part of both teacher and their learners to extract ideas outside and practice them mutually. Congruently, EG makes use of lexical units to make notes of changed discussions on topics advocated by the researcher. As a final point they act the role-play activity to stop the monotony of the class time and activities and bring the incentive. These activities develop learners' writing and augment self-confidence additionally the advancement of their writing performance. This enlargement is due to the kind of teaching and learning huge amount of vocabulary repertoire and extemporaneously using them in their descriptive academic paragraph writing and subsequently in their written communication.

## **Recommendations**

To implement the vocabulary-based theory in language learning to develop and enhance descriptive paragraph writing ability, the next recommendations can be taken into reason:

- 1) Teachers should incorporate diverse kinds of vocabulary items learning into the writing tasks.
- 2) They should similarly increase learners' consciousness of these lexical items.
- 3) They should not excess learners.
- 4) Learners are recommended to save written archives of the dissimilar types of lexical items every time they do the listening details procedures.

## Conclusion

In sum, in line with the results of this exploratory study the implementation of vocabulary-based approach takes a vital role in increasing learners' level and performance in descriptive paragraph writing ability as it is shown by the mean score in their posttest (particularly the EG). Quite the reverse, for the CG, ever since no treatment; they receive no

vocabulary-based approach treatment procedure, consequently their achievement is comparatively not higher as that in the EG. As it is observable that the present study aims at mounting writing on the typology of descriptive. The findings of the study suggest that the learning that occurs according to the adopted approach has a constructive impression on the writing ability growth. The performance of writing of the EG was superior to that of the CG. EG outperforms in writing than CG. Accordingly, countless work should be prepared on the implementation and usefulness of vocabulary-based learning in approaching and upgrading the possibilities that may be found in writing ability in descriptive paragraphs related to human senses. Subsequently, in brief that learners' writing ability can be exalted by the practice of lexical approach that aims at raising learners' performance in vocabulary repertoire and that in turn will increase their linguistic competence and consequently enhancing their writing skill. Additionally, to the score analysis, teachers need to pay more commitment to the learners' vocabulary repertoire such as collocations and phrasal verbs in the class. It is deep-rooted that the practice of the acquisition of vocabulary items can support learners to use English positively and accurately.

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