



## **Vagueness in Researches Abstracts**

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### **Abstract**

Vagueness refers to the form of expression that has an open range of interpretations. Certainly, a research paper begins with an abstract. The abstract should be a self-contained piece of information, clear, concise, brief, comprehensive, precise, and to the point. The problem of the present study focuses on the reasons behind using vague words or expressions in writing research abstracts. The current study aims at identifying vagueness in research abstracts used by researchers. The researcher has analysed two abstracts following Kempson's (1977) model of vagueness. The model is based on four types of vagueness: referential vagueness, indeterminacy of meaning, lack of specification in the meaning of an item and disjunction in the specification of the meaning of an item. The abstracts are taken from "College of Basic Education Researches Journal", Iraq; and "AL-Kitab Journal for Pure Sciences", Iraq before being reviewed and published. The results of the study show that the researchers used 8 cases of vagueness for the sample of the study. Referential vagueness scored the percentage (50%), the indeterminacy of meaning and lack of specification in the meaning of an item (25%), and finally, no cases of disjunction in the specification of the meaning of an item were found. To sum up, it has been concluded the reason behind using vague words or expressions in writing abstracts due to the lack of knowledge about vague expressions and using imprecise words. Also, the reason behind using vague words or expressions in writing abstracts attributed to misuse of punctuation marks.

**Key words: Vagueness, Ambiguity, Fuzziness, Hedges, Abstracts**

## الغموض في مستخلصات البحوث

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### المستخلص

يشير الغموض إلى شكل التعبير الذي يحتوي على مجموعة مفتوحة من التفسيرات. ومن المعلوم ان البحث يبدأ بالمستخلص. ويجب أن يكون المستخلص عبارة عن معلومات قائمة بذاتها، واضحاً، مختصراً، موجزاً، وكذلك يجب ان تكون المعلومات شاملة، دقيقة ومباشرة. تركز مشكلة الدراسة الحالية على أسباب استخدام الكلمات أو التعبيرات الغامضة في كتابة مستخلصات البحوث. وتهدف الدراسة الحالية إلى تحديد الغموض في مستخلصات البحوث التي يستخدمها الباحثون. ويسترشد الباحث بالنموذج اللغوي الخاص بالغموض للعالم كيمبسون (1977). ويعتمد هذا النموذج على أربعة أنواع من الغموض: الغموض المرجعي ، عدم تحديد المعنى، نقص في التوصيف في معنى المفردة والانفصال في التوصيف في المعنى المفردة. وتتألف عينة البحث مستخلصين قبل مراجعتها ونشرها في "مجلة أبحاث كلية التربية الأساسية" ، العراق و"مجلة الكتاب للعلوم الصرفة" العراق. أظهرت نتائج الدراسة أن الباحثين استخدموا (8) حالة من حالات الغموض لعينة الدراسة. سجل الغموض المرجعي أعلى نسبة (50%)؛ عدم تحديد المعنى و نقص في التوصيف في معنى المفردة (25%) وأخيراً لم يتم العثور على حالات انفصال في توصيف في معنى المفردة. خلاصة القول، تم الاستنتاج بأن السبب وراء استخدام كلمات أو تعبيرات غامضة في كتابة المستخلصات بسبب نقص المعرفة حول التعبيرات الغامضة واستخدام كلمات غير دقيقة. وكذلك السبب يُعزى إلى سوء استخدام علامات التنقيط.

**الكلمات المفتاحية:** الغموض، الالتباس، الضبابية، التحوط، المستخلص

### 1. Introduction

Language is the main method of human communication, whether spoken or written, which consists of using words in a structured and conventional way (Stevenson, 2010: 992). Communication is the fundamental function of language and it is one of the prerequisites for successful language instructions. So, it becomes a central issue to guarantee successful communication at all levels. Nevertheless, not all

sentences or utterances are successfully constructed and understood. A common phenomenon of this communication failure occurs when a given expression tends to have more than one interpretation or meaning due to many reasons among which is vagueness (Salman, 2013: 391).

Vagueness is the form of the expression that has an open range of interpretations (Salman, 2013: 393). It is one kind of language imprecision (Bassham et al., 2011: 87). Typically, a research paper begins with an abstract, which is one of the main elements of any research. The abstract should be concise, clear, specific, comprehensive and precise. In the present study, the effort is focused on clarifying the types of vagueness used in some research abstracts and how to avoid them.

### **1.1 Statement of the Problem**

The main problem which this study tries to handle is that some researchers use unclear language in writing abstracts due to the employment of vague words or expressions which make the meaning imprecise and leads to different interpretations by the readers.

### **1.2 Research Question**

The present study is an attempt to answer the following questions:

1. What are the reasons behind using vague words or expressions in writing abstracts?
2. How could researchers avoid using vague expressions in writing abstracts?

### **1.3 Aims of the Study**

This study aims:

1. To identify vagueness in abstracts used by researchers.

2. To suggest useful solutions to avoid vague expressions.

#### **1.4. Hypotheses**

Based on the mentioned aims, the present study hypothesizes the following:

1. Using imprecise words causes vagueness in the interpretation of sentences.
2. Semantic vagueness is strongly present in some abstracts.

#### **1.5 Methodology**

The present research depends on a quantitative method in which a set of abstracts was analyzed in addition to data collection. The procedure, and model of analysis are shown below:

##### **1.5.1 Data Collection**

The data corpus for this study consists of two abstracts before reviewing and publication in “College of Basic Education Researches, Iraq, 2020, and “AL-Kitab Journal for Pure Sciences”, Iraq, 2020. The title of the research and the names of the researchers are not of interest to this study.

##### **1.5.2 Procedures**

The two samples of abstracts have been analyzed to find out the vague words and expressions and classify them into four main types: referential vagueness, indeterminacy of meaning, lack of specification in the meaning of an item and disjunction in the specification of the meaning of an item. Then, a discussion follows to show the reasons of using these types.

### 1.5.3 The Model of Analysis

The present study mainly adopts Kempson's (1977) model of analysis of vagueness. The model adopts four types of vagueness in the analysis, namely: (1) **referential vagueness** means the meaning of an item sufficiently clear, but it may be difficult to determine whether the item can be applied to certain objects or not; (2) **indeterminacy of meaning** means the meaning of a lexical item itself indeterminate; where the interpretation appears itself quite intangible; (3) **lack of specification in the meaning of an item**, where the meaning is clear but is only generally specified and (4) **disjunction in the specification of the meaning of an item**, where the meaning includes an either-or statement of various interpretation possibilities.

### 1.6 Limits of the Study

The present study is limited to samples of abstracts taken from "College of Basic Education Researches, Iraq, 2020, and AL-Kitab Journal for Pure Sciences 2020.

### 1.7 Value of the Study

The research is an attempt to explain the reasons behind the vagueness in researcher abstracts. Furthermore, it is a great benefit to the researchers to make them aware of vague expressions to be avoided to reach better and clearer writing. It is of benefit to the teachers to explain to their students vague expressions in order to avoid in their writing, and it is also benefit for students to know vague words in order to avoid using them in their writing.

## 2. Theoretical Background and Literature Review

## 2.1 Definitions of Vagueness and Related Terms

### 2.1.1 Vagueness

Vagueness of language is a universal phenomenon. Vagueness is embodied in various aspects of language as an attribute of natural language like speech sounds, meanings of words, grammar, etc. (Gao, 2014: 2614).

The British philosopher and mathematician, Bertrand Russell (1923:89-90) gives the following definition of vagueness, “a representation is vague when the relation of the representing system to the represented system is not one-one, but one-many”.

Danell (1978) defines vagueness as “A term is said to be vague if there are cases in which there is no definite answer as to whether the term applies” (Boakye, 2007: 14).

Philosophers of language have described vagueness as a semantic property of linguistic expressions. Psychologically, semantic vagueness manifests itself in the uncertainty of speaker about what to say, as Grice’s definition of ‘vagueness’ an expression is vague (in a broad sense of vague) means that there are cases (actual or possible) in which one just does not know whether to apply the expression or to withhold it, and one’s not knowing is not due to ignorance of the facts (Grice, 1989: 177).

As so, we can extract a general definition of vagueness as an imprecise, unspecific, indeterminacy of meaning and lack of clarity of word or group of words that makes the reader/hearer infer/confuse/wonder what the writer/speaker exactly means. Vagueness covers generality, fuzziness and hedges.

### 2.1.2 Ambiguity

The term “ambiguity” is a linguistic condition that is derived from both Latin and French in the early 16<sup>th</sup> century. The Latin word ‘ambiguus’ means ‘shifting’ or ‘doubtful’ whereas the French word ‘ambigere’ means ‘go round’, ‘wonder about’ and ‘argue’. From the Latin word, we can say that ambiguity is the quality of an expression that has more than one possible meaning. Since words and sentences can have more than meaning, it appears to be a common phenomenon in language. Ambiguity arises when the language users use expressions in their speech and writing consciously or unconsciously, which allow for double or multiple interpretations (Alerechi and Joshua, 2018:109).

Zhang (1998:5) defines ambiguity as an expression having more than one meaning that is semantically distinct. Bussmann (2006: 50) states that ambiguity in natural languages is the property of an expression that can be interpreted in several meanings, and can be multiply identified in linguistic description from lexical, semantic, grammatical, and other aspects.

### **2.1.3 Generality**

Generality means the meaning of one word applies to a part of reality that can be divided into smaller and clearer parts (Devos, 2003:130).

The meaning of an expression is general in the sense that it does not specify certain details; that is, generality is an issue of un-specification. For instance: the meaning of sentence (John saw Mary) is general since it does not specify whether John saw Mary in a park or in a university, or anywhere else (Zhang, 1998:5).

An expression is considered general if connotation of the expression is a genus of more than one species, such as the word ‘color’

is general to: red, green, blue, etc. (Gillon, 1990:394). An expression is vague inasmuch as there are cases where no definite answer exists as to whether it applies or not (Ibid: 410).

#### **2.1.4 Fuzziness**

Zadeh (1965) was first to introduce fuzzy set theory to examine categories with fuzzy boundaries (Zhang, 2015:11). He defines fuzzy set as a class of entities with a continuum of degree of membership between 0 and 1 to each entity. The concepts of inclusion, union, complement, relation, convexity, etc., are extended to this set, and different properties of these concepts in the context of fuzzy sets are established. Specifically, a separation theorem for convex fuzzy sets is demonstrated without requiring that the fuzzy sets be disjoint (Zadeh, 1965:338).

Crystal (2008:204) defines fuzzy as a term which derived from mathematics and used by linguists to denote the indeterminacy involved in analyzing a linguistic pattern or unit. For instance, it is argued that several lexical items are best considered to represent a semantic category that has a fixed core with fuzzy boundary, and allowing flexibility to apply in the appropriate context to a wide range of entities. For example, the boundaries between cup and glass are difficult to define. Other items which make language fuzzy contain sort of, rather, quite, etc.

In natural language, fuzzy sets aim at representing the lexical imprecision as in the phrase “The ship is far away from the coast”, where there are no sharp boundaries in the class of locations far from the coast, but there are borderlands. So ordinary sets are not enough to model the subjective, vague concept ‘far away’ (Kruse et al, 1991: 43-44).

Zadeh's (1965) idea of fuzzy set embodies the notion of gradual predicates in which the idea of a precise boundary between situations



where this predicate applies and situations where it does not is meaningless (Dubois et al., 2017: 1031).

### 2.1.5 Hedges

The term “hedge” refers to the idea of barrier, limit, defense, or the act or means of protection or defence (The Oxford English Dictionary) (Piotti, 2011:15).

In linguistics, the use of the term hedge dates back at least to the early 1970s, when George Lakoff (1972) published his article “Hedges: A Study in Meaning Criteria and the Logic of Fuzzy Concepts” (Mulatsih, 2008:74). He says, for me some of the most interesting questions are raised by studying the words whose meaning implicitly includes fuzziness- words whose function is to make things fuzzier or less fuzzy (Lakoff, 1973:471). Lakoff (1972) suggests that there are too many ways to hedge in English, including the use of impersonal phrases, the modal system, **verbs** like ‘seem’, ‘look’, and ‘appear’, sentence introductory phrases such as ‘I think, ‘I believe’ (Murphy, 2010: 48).

Hyland (1996) explains hedging as devices used to indicate a lack of whole commitment to the truth of the proposition, and a desire not to categorically express the commitment. Hedges can be used intentionally or unintentionally in both spoken and written language because they are crucial to communication (Behnam and Khaliliaqdam, 2012:74).

Hedge as a semantic perspective is a particle, word, or phrase that modifies the degree of membership of a predicate or noun phrase in a group; membership that it is partial, or only true in some respects, or is

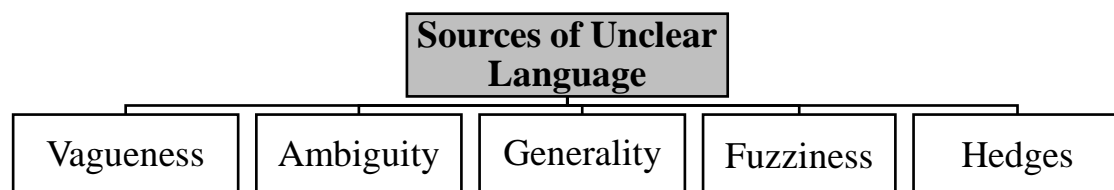
truer and more complete than one might be expected (Brown and Levinson 1987: 145).

### 2.1.6 Clarity

Clarity refers to clearness or lucidity in terms of perception or understanding (Xanthaki, 2014:88). It is an important to facilitate knowledge transfer for communication to become smoother in order to improve particular attention to the clarity of conveyed knowledge to avoid create confusion, misunderstanding, or misapplication of knowledge (Himood et al, 2019: 3219).

According to Agarwal, the ultimate goal of good writing is clarity while unclear writing makes readers unable to understand (2010:69). Clarity prevents confusion. The sentences sometimes are so cluttered. The readers in such situation fail to interpret with exact and correct meaning of them (Ibid: 47). For achieving clarity, direct expressions should be used, use of inaccurate expressions should be avoided (Ibid: 63).

Since vagueness refers to a lack of clarity, it's important to write research abstract clearly and not vaguely to communicate effectively.



**Figure (1): Sources of Unclear Language**

### 2.2 Types of Vagueness

Vagueness is the property of insufficient precision or lack sense distinction. Words, phrases, sentences, or whole passages may be vague

or inaccurate (Bickenbach and Davies, 1998: 118). **Kempson (1977: 124-125) said that there are four types of vagueness:**

- 1. Referential vagueness** means the meaning of an item sufficiently clear, but it may be difficult to determine whether the item can be applied to certain objects or not. There are many examples of this kind of vagueness. When is a mountain simply a hill not a mountain? When is a forest simply a wood not a forest? What crucially distinguishes a city from a town?
- 2. Indeterminacy of meaning** means the meaning of a lexical item itself indeterminate; where the interpretation appears itself quite intangible. The **possessive construction** such as, “John’s book”, is the most extreme example of this in English. “John’s book” can be used to describe the book John wrote, the book he owns, the book he has been reading, the book he has been told to read, the book he was carrying when he came into the room, etc. The meaning is otherwise quite indeterminate. We might also wish to introduce ‘good’, as its meaning appears, while intuitively at least in the main homogeneous, to be so variable.
- 3. Lack of specification in the meaning of an item**, where the meaning is clear but is only generally specified. For instance, the word ‘neighbor’ is unspecified for sex, or for that matter, age, or race, etc. Perhaps less obvious examples are **verbs** like, go and do which both have a clearly specifiable meaning and yet cover a wide variety of actions, since this meaning is so general. The sentence “He went to the station” can be used to describe walking, running, biking, driving a car, to mention only a few.
- 4. Disjunction in the specification of the meaning of an item**, where the meaning includes an **either-or** statement of various interpretation

possibilities. The implication contributing to the whole sentence is that one of two disjuncts is true. For example: “John or George went to the market”. In this sentence, it is unclear whether John was the one who went to the market or George.

## **2.3 Research Abstract**

### **2.3.1 Definition of an Abstract**

The Abstract is referred to as a ‘mini-article’ (Leong et al., 2016: 135). It is a brief summary of a research article, thesis, review, conference proceeding or any in-depth of a specific topic, which is often used to help the reader quickly decide the purpose of the paper (Rukwaru, 2017:47). The abstract should be a self-contained piece of information (De Beaugrande et al., 1998:237), clear, concise summary (Suresh, 2014: 489) and accurate presentation of the document's contents, without any external interpretation or criticism (De Beaugrande et al., 1998:237).

The abstract should not be vague and general on the one hand, and not be fussily detailed on the other. Rather, it should be precise and selective. As its name suggests, an abstract (ab, out + trahere, to pull) should select (pull out) the highlights from each section of the paper (Zeiger, 1999: 269). And also should avoid sentences that are too vague and worthless (e.g., “Differences between two numerical forecast models are examined, and the cause of these differences is discussed.”). As in the title, we should avoid abbreviations and unnecessary jargon in the abstract (Mack, 2018: 107). The purpose of an abstract is to provide a concise overview of the entire text so that potential readers get an idea of what the report, thesis, article, etc. (Schiller et al., 2011: 167)

### **2.3.2 Components of an Abstract**

An abstract is written as one paragraph in many cases (Parija and Kate, 2017: 31). It is consisting of a limited number of words referring to the research work accomplished. An abstract makes the reader want to learn more about the research if completed well (Riejios et al, 2011:4).

**There are the basic components of an abstract in any discipline:**

- 1) **Stating the problem / Motivation:**
- 2) **Methods/procedure/approach:**
- 3) **Results/findings/product:**
- 4) **Conclusions/implications** (Riejios et al., 2011: 4-5).

## 2.4 Previous Studies

**Cutting (2012)** study aimed to show the level of information across conference abstracts (CAs), and to discover any differences between CAs based on complete and incomplete research. The study examined abstracts for a conference of the British Association for Applied Linguistics and a Sociolinguistics Symposium in terms of vague language, specially universal general nouns (such as people) and research general nouns (such as results), and discovering whether the language used reflected the level of completeness abstract (whether the data was collected or analyzed). A questionnaire was used as a research tool which was given to authors writes to rate their research's level of completeness, from 1 'none', 2 'a little', 3 'half', 4 'most', to 5 'all'. The study sample consisted of (203) individuals who were presented at the conference, 58 questionnaires returned, and of these 39 were usable during BAAL2003, and (432) individuals submitted papers, 75 questionnaires were returned, and 67 of them were usable for SS2004.

It was found that the analysis was not completed by half of the authors and some had not finished gathering their data, and the abstracts consisted mostly of moves in introduction and method. Vague language is part of the conference's abstract genre, as all authors use it (Cutting, 2012: 283-286).

**Gao's (2014)** study focused on the vagueness in Chinese address terms, expounding the attribute and attempting to improve the understanding of vague terms from the semantics angle by readers. All vague terms share three features: determinacy of meaning; indeterminacy of meaning; and variation. To some extent, some Chinese address terms are vague, and the extensive use of them is the most obvious vagueness manifestation.

The author concluded that we must admit the existence of vagueness in daily communication, especially in social life other than usual scientific research. In communication, we use vagueness because not everything is as precise as the scientific data. In addition, if we stress accuracy, we should bear in mind that only in a comparative sense we can be precise. We can turn to vagueness for help when we do not have an accurate idea. We need vagueness in order to describe some vague concepts. Vagueness in language is one of the important concept related to extended Chinese addresses, since the widespread use of address forms is the most obvious manifestation of vagueness in Chinese (Gao, 2014: 2615- 2618).

**Cusen (2019)** reported the IMRaD moves (Introduction, Method, Results and Discussion) on an exploratory investigation showing the degree of information in terms of referential explicitness of academic texts and the use of vague language in abstracts of academic journal articles. The sample consisted of (62) abstracts published in 2010 and

2011 from an article in an academic journal. The research focused on the following areas: literature and cultural, language and linguistics studies. The data analysis was guided by the following questions: 1. What are the functions of the vague language (VL) forms in the corpus found in the IMRaD movements? 2. What are the forms of VL in the corpus and what is their function? It was revealed that the authors use vague language (such as 'vague quantifiers', 'general nouns' and 'hedging devices') and that the abstracts often consisted of Introduction and discussion moves.

The findings of study might lead to more extensive work in the same line and data (abstracts) from other research fields (medicine, engineering, business, etc.) could be gathered in a much larger corpus to help explore how their IMRaD moves and how VL is used that differs from those focused on language, cultural or literature studies (Cusen, 2019: 1-7).

### 3. Text analysis

#### 3.1 Data analysis

##### Abstract One

The following table shows the numbers and percentages of vague words and expressions in abstract One.

**Table (1) Numbers and Percentages of Vagueness in Abstract One**

Types of Vagueness	No.	%
Referential vagueness	1	33.33%
Indeterminacy of meaning	0	0%
Lack of specification in the meaning of an item	2	66.67%
Disjunction in the specification of the meaning of an item	0	0%

Table (1) above shows that referential vagueness is the highest among the types of vagueness (66.67%), lack of specification in the meaning of an item came second in rank order (33.33%), and finally, no cases of the indeterminacy of meaning, disjunction in the specification of the meaning of an item was found.

**Following are examples of vagueness in abstract one:**

(1) The research dealt with the study and analysis of the economic importance of pipelines transporting oil in the countries of the Arab **Mashreq** through quantitative statistical methods in studying the productive efficiency of the network and its relationship with **other** economic foundations, and the study showed **different power relations** between the pipelines network and the economic foundations and the most influential pillars on the lengths of the pipeline **network are The number** of the lines whose correlation was about 0.857, oil export with pipelines with a correlation rate of about 0.836, and the total oil financial return with a correlation degree of about 0.836, and the study made several proposals, the most important of which is the reactivation of oil pipelines that have stopped working in the region, such as Iraq, Saudi Arabia and Syria, and interest in building pipelines.

The phrase “**the countries of the Arab Mashreq**” lacks specification because it is unclear for the reader which countries in the Arab Eastern intended. The sentence “the study showed different power relations between the pipelines network and the economic foundations and the most influential pillars on the lengths of the pipeline **network are The number** of the lines whose correlation was **about** 0.857” is vague for the reader because of using punctuation marks incorrectly. The researcher did not mention what are the **other** economic foundations” so it lacks specification of meaning. Also, the adverb “**about**” is a



referential vagueness because correlation of the number of the lines, a correlation rate of oil export with pipelines and a correlation degree of the total oil financial return are imprecise.

### Abstract Two

The following table shows the numbers and percentages of vague words and expressions in abstract two.

**Table (2) Numbers and Percentages of Vagueness in Abstract Two**

Types of Vagueness	No.	%
Referential vagueness	3	60%
Indeterminacy of meaning	2	40%
Lack of specification in the meaning of an item	0	0%
Disjunction in the specification of the meaning of an item	0	0%

Table (2) above shows that referential vagueness is the highest among the types of vagueness(60%), the indeterminacy of meaning came second in rank order (40%), and finally, no cases of lack of specification in the meaning of items. No disjunction in the specification of meaning of an item was found.

#### Following are examples of vagueness in abstract two:

(2) The PNS method can achieve **lower** computational complexity **than** the MUSIC in the grid searching stage, while not debasing the performance of angle estimation.

In above sentence, the adjective “**lower than**” is a referential vagueness because we do not know the degree of computational complexity that is lower than the MUSIC.

(3) Numerical simulations are achieved with a **different** signal to noise ration to show the effect of the false peaks.

The word “**different**” in this sentence has indeterminate meaning because the reader wonders what this signal is.

(4) A Monte Carlo simulation with a **different number** of antenna elements is implemented and results verified that the detection performance and estimation accuracy of the PNS and MUSIC are comparable and **much better than** the PHD algorithm.

The phrase “**different number**” in the above sentence has indeterminate meaning because the reader still wonder what the different number of antenna elements is, and the expression “ **much better**” is a referential vagueness because we do not know how much detection performance and estimation accuracy of PNS and MUSIC is better than PHD algorithm.

(5) It is also demonstrated that PNS presents a **lower** computational load than the MUSIC method.

Here, the adjective “**lower**” is a referential vagueness because we do not know how much computational load the PNS presents.

## 4. Results and Discussion

### 4.1 Results

The results of the analysis reveal 8 cases of vagueness. As shown in Table (3), the referential vagueness found (4) cases with the highest percentage of (50%), lack of specification in the meaning of an item and the indeterminacy of meaning came second in rank (2) cases with a percentage of (25%), and finally, no cases of disjunction in the

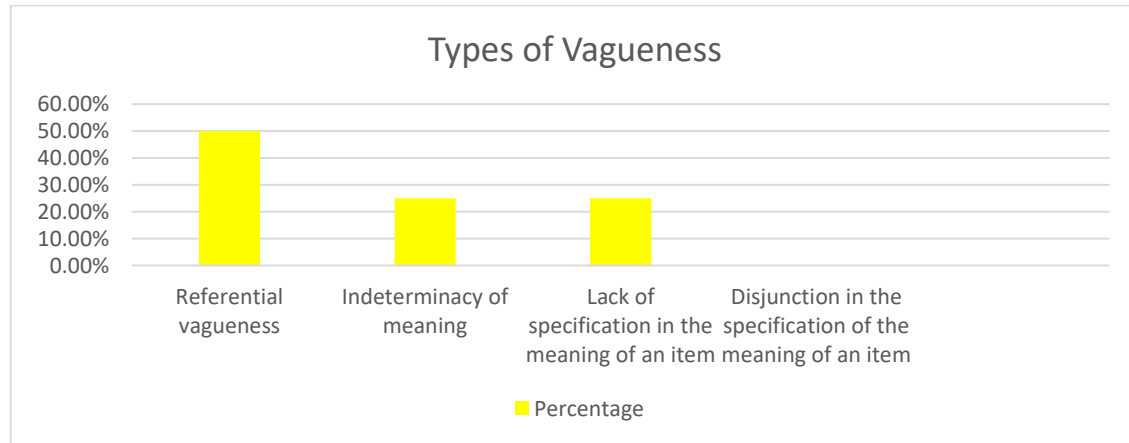
specification of the meaning of an item was found. One case of vagueness has also been found due to misuse of punctuation marks

Table (3) below shows the total Numbers and Percentages of Vagueness in the abstracts chosen for the study.

**Table (3) Total Numbers and Percentages of Vagueness in Abstracts**

Types of Vagueness	No.	%
Referential vagueness	4	50%
Indeterminacy of meaning	2	25%
Lack of specification in the meaning of an item	2	25%
Disjunction in the specification of the meaning of an item	0	0%
<b>Total</b>	<b>8</b>	<b>100%</b>

The table can be represented by figure (2) below for clarify of illustration.



**Figure (2): Types of Vagueness**

## 4.2 Discussion

Most researchers used vagueness in their researches abstracts. This could be attributed to the lack of sufficient information about English language that leads to distorting the facts and misinterpretation of the texts.

As can be seen from table (3), referential vagueness is the most frequent type of vagueness in the research abstracts because of the use of imprecise words. Some sentences lack specification in meaning which can be attributed to the fact that the writers have no knowledge of what is actually satisfactory, and that leads to difficulty of interpreting the text. Also, some sentences have indeterminate meanings due to uncertainty and the variations in interpretations.

Finally, no cases of disjunction in the specification of the meaning of an item were found in the samples of the study because it is rarely used, for this reason it did not appear in the samples of the study. It has also been found poor use of punctuation marks leads to vagueness in some sentences.

## **5. Conclusions, Recommendations and Suggestions for Further Research**

### **5.1 Conclusions**

On the basis of the results obtained and discussion, the following conclusions can be drawn:

1. The reasons behind using vague words or expressions in writing abstracts can be attributed to the lack of sufficient information about English language that leads to distorting the facts and misinterpretation of the texts.
2. Using imprecise inaccurate words causes vagueness in the interpretations of some sentences. The researchers can avoid using vague expressions in the abstracts by using precise and clear expressions.
3. Of the four types of vagueness, three were found to be used in the abstracts under investigation: referential vagueness, indeterminacy of

meaning and lack of specification in the meaning of an item. Whereas no cases of the disjunction in the specification of the meaning of an item were found.

4. Semantic vagueness is present in some abstracts when the researchers translate the sentences from source language (Arabic) to English and the structure of the two languages is different.

## 5.2 Recommendations

With regard to the conclusions, the following recommendations can be set:

1. Setting special courses for the researchers on how to write research abstracts clearly.
2. The researchers must improve their English language to write their research abstracts in a more precise, specific and clearer way.

## 3. Suggestions for Further Research

In order to achieve benefit, the following topics are suggested for future studies:

1. Vagueness in scientific academic writing.
2. Vague constructions in literary texts.
3. The use of vague expressions in political speeches.

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## **Appendix I**

### **Abstract of College of Basic Education Researches Journal**

#### **Abstract One**

The research dealt with the study and analysis of the economic importance of pipelines transporting oil in the countries of the Arab Mashreq through quantitative statistical methods in studying the productive efficiency of the network and its relationship with other economic foundations, and the study showed different power relations between the pipelines network and the economic foundations and the most influential pillars on the lengths of the pipeline network are The



number of the lines whose correlation was about 0.857, oil export with pipelines with a correlation rate of about 0.836, and the total oil financial return with a correlation degree of about 0.836, and the study made several proposals, the most important of which is the reactivation of oil pipelines that have stopped working in the region, such as Iraq, Saudi Arabia and Syria, and interest in building pipelines. It is proposed between the producing countries and the traffic countries in order to raise the level of economic cooperation between the countries of the Arab Mashreq region with the global environment.

## Appendix II

### Abstract of AL-Kitab Journal for Pure Sciences

#### Abstract Two

This paper presents a new angle of arrival (AOA) method to overcome the problem of spurious peaks that appear with Pisarenko Harmonic Decomposition (PHD) algorithm. The proposed method is called partial noise subspace (PNS); it is picking k-subsets of the rows/columns of the noise subspace matrix. The PNS method can achieve **lower** computational complexity than the MUSIC in the grid searching stage, while not debasing the performance of angle estimation. The idea and principle of working of the proposed method are presented and the mathematical model is derived. Numerical simulations are achieved with a **different** signal to noise ration to show the effect of the false peaks. A Monte Carlo simulation with a **different number** of antenna elements is implemented and results verified that the detection performance and estimation accuracy of the PNS and MUSIC are comparable and **much better** than the PHD algorithm. It is also demonstrated that PNS presents a **lower** computational load than the MUSIC method.