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A Phonetic Evaluation Of Google Transliteration Of Arabic: A Call Seeking To More Brevity And Accuracy

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Abstract

This study is an attempt to explore how Google transliteration tool transliterates Arabic to English and the inconsistencies it produces. However, the current article attempts to spotlight on the following question: - What improvements can be made to the tool to enhance its brevity and accuracy through relying on pronunciation? In terms of objectives, the study aims at evaluating the effectiveness of Google Transliteration of Arabic in terms of brevity and accuracy besides investigating the impact of pronunciation on the tool's transliteration output in order to explore areas for improvement in the functionality of this tool. A sample of texts undergo double transliteration from Arabic to English have been collected, transliterated by using the Google Transliteration Tool and according to the new perspective of the researcher, analyzed and then compared in order to scrutinize the number of words that are subject to changing or brevity and accuracy. According to the researcher new perspective among pronunciations of words on the syllable level, there are (500) errors representing vowel errors. Whilst (105) of all cases misrepresent single consonant. Overall, a high percentage of the tokens contained pronunciation errors, which could trigger errors in transliteration. Moreover, after analyzing the different errors that occur in the transliteration of Google, two principal reasons can be summarized: mismatches between sounds and letters in the system of Google transliteration tool and no unified and strictly followed rules. To avoid the transliteration errors and improve the readability of Arabic for foreign learners, a facilitated solution accessed by all is necessary for standard transliteration in Arabic. The value of this study stems from its dedication for those who are interested in learning the pronunciation of Arabic and how to speak by using this language.

Keywords: Transliteration, Google Transliteration Tool, Phonetic approach of transliteration, Modern Standard Arabic

Introduction

Despite the multiplicity and diversity of means and methods of communication among peoples, languages remain the best and most sublime communication tools. When we ask why we learn Arabic, English, or Turkish, or why we would like to learn it, the answer would be, "So that I can understand it when I hear it spoken, understand it when I see it written, and then speak and write it fluently and accurately when I want to use it."

Generally speaking, transliteration is the process of converting text from one script or alphabet to another, while maintaining the original meaning and pronunciation. Linguistically speaking, transliteration is a linguistic process that involves the systematic representation of words or texts from one language in the script or alphabet of another language, with the goal of preserving the original phonetic and orthographic characteristics.

This study is part of the simplification and facilitation process that researchers and practitioners of languages are seeking, whether through exploring, evaluating, analyzing, teaching and learning. It is also a contribution to the ongoing debate surrounding the topic of "facilitation" in Arabic transliteration. The ultimate goal of this study is to open new horizons for those who are keen in communicating, teaching and learning the Arabic language, and to offer them useful suggestions that will contribute to facilitating its use and expanding its circulation.

In early times, transliteration occupies those who are interested in languages and linguistics both individuals and institutions in the Arabic and Western worlds. However, great efforts have been dedicated in order to put controlling rules and patterns for this serious matter, though they are lacking unity and serious application.

In any case, the motivation for choosing this topic is the existing weakness in the transliteration and consequently the reading, understanding and using of Arabic. However, when we talk about the weakness in the transliteration of Arabic, it does not necessarily imply a weakness in the Arabic language itself. The other motivation is to change the prevailing belief about the difficulty of the Arabic language and demystify the difficulty of reading, writing, and, consequently, communicating.

Related Work

Numerous studies have been conducted on the topic of transliteration. Most of them in the field of translation, others are concerned with bilingual language information retrieval and transliteration of dialects of the same language. Still others are related with scrutinizing errors found in transliteration of Arabic.

According to AbdulJaleel and Larkey (2003), out of vocabulary words (OOV) are problematic in translation and cross language information retrieval in (English- Arabic), especially when the two languages have different sound systems or different orthography. Accordingly, transliteration of the unknown words will be good solution for this problem. The researchers find that transliteration either of OOV named entities or of all OOV words is an effective approach for cross language Information Retrieval.

Creating bilingual Transliteration dictionary is good idea done by Kirschenbaum and Wintner (2010) at least for familiar words and names. They regarded dictionaries as crucial sources for unifying efforts in transliteration through describing a general method to create bilingual transliteration dictionary that can be used with any language pairs. However, their similarity measure is based only on consonants since vowels correspondences across languages tend to be less predictable.

Most importantly, some studies deal with transliteration of the dialects of the same language, since there are differences among these dialects, like the study by Guelliel et al (2016) which proposes a method for the application of new approach namely the neural transliteration model relying on character-level in transliteration the Arabic dialect "Arabizi" found in Algeria to Modern Standard Arabic scripts. Or the study by Younes, et al (2018: 238) which tackles the issue of double transliteration of Tunisian dialect. They claim that in the literature, most the bilingual transliteration lexicons are "small in scale and/or compiled manually considering the amount of potential transliteration pairs in the open domain, it is almost impossible to construct a comprehensive transliteration lexicon". To alleviate this problematic area an automatic approach for extracting transliteration pairs from “Web corpora could serve as a good solution”.

Moreover, through using the conventional orthography for dialectical Arabic CODA, Hebash et al (2018) map the Arabic texts to Arabic scripts. However, this convention is approximate to modern standard Arabic system of orthography. Although, it has some shortcomings, it is a landmark in unifying efforts to standardize the Arabic transliteration.

By using an error analysis study, Al-Jarf (2022) explores the gemination errors found in the Arabic-English transliteration of personal names on Facebook. However, the researcher finds that “only one third of the Arabic name tokens with geminates are transliterated correctly, i.e., the geminated consonant in Arabic is represented by a double consonant in the corresponding English transliteration as in compound names (Abdullah, Noureddin) and Nassar, Algammal, Alqattan, Allam”. There is also an instances of overgeneralization of repeating consonants in the English transliteration of Arabic names that are normally pronounced with a single consonant phoneme.

A unified model of Arabizi and transliteration has been investigated by Shazal et al, (2022). According to them, their system arrives at 86% of word accuracy by utilizing the sequence-to-sequence models (Shazal et al, 2022: 167).

Al-Ghanim et al, (2024) explore the potential vulnerability to jailbreaking attacks from the "Large Language Models" concentrating on the various forms of Arabic. However, they find unsafe content through using transliteration and chatspeak.

All in all, the literature concerning transliteration lacks to studies focusing on the transliteration of Standard Arabic that concentrate on the phonetic aspects of Arabic. In addition to the lack of the focus on Google-specific or standard transliteration.

Transliteration

The English term “transliteration” refers to the representation of letters of one language by letters of another. When translating this term into Arabic, a major difference occurred, because this process was known in the Arab heritage only within very narrow limits. Therefore, contemporary translators have endeavored to define it by dividing it into “written transfer,” and “literal transmission.” Some linguists have coined a single word from “transliteration,” which is “naqhera,” ((نقحرة a curious coinage that has sparked much debate in linguistic circles, which means the literal transferring of a word from Arabic to English written scripts (Al-Shami, 2019: 945).

“Under this general term, many specific terms can be included. Transliterating Arabic words into the Latin/Roman letters used in writing European and other languages is called Romanization or Latinization. Transliterating foreign words into Arabic letters is called Arabization, and it differs from Arabization, in which foreign words are changed phonetically and metrically to conform to Arabic meters” (Al-Sawahili, 2012: 6).

Many modern linguists use the term "Romanization" to write Arabic in Latin letters, which is more eloquent and clearer in its meaning. Arabic online chat has become popular in the modern era by using Latin letters and numbers instead of some Arabic letter sounds not found in the Latin alphabet. For example, the number 3 is used instead of the letter "ayn" in Arabic. The word "Arabi," for example, is written as: 3arabi (ibid).

In general, distinguished approaches have been employed in transliteration. One of them is the Rule-Based approach, which depends on orthography where it utilizes predefined rules to map characters from one script to another. This method is effective for languages with consistent phonetic patterns. Another prominent one is the Phonetic Approach, which is based on pronunciation or sounds, focusing on the sounds of words rather than their spelling. However, this approach is of benefit for languages with complex writing systems. A third approach is the Hybrid one that combines multiple techniques, such as rule-based and phonetic methods, for the purpose of having more accurate transliteration.

Each language has its unique phonetic system, which consists of a “phoneme inventory, phonic rules, and prosodic rules where ambiguity arises when we attempt to map sounds across phonetic systems, especially when they are different. In manual translation, the transliteration ambiguity can be mitigated if translators or the ones who work in transliteration observe common rules that follow the “transliteration-by-sound principle”. For example, translation professionals in “mainland China follow guideline recommended by the Xinhua News Agency [1992]. Words transliterated by closely observing common strategies are referred to as regular systematic transliterations.

However, “Web publishing, translators in different countries and regions may not observe the same strategies or guidelines. They sometimes “skew the transliterations in different ways to create special flavors or to introduce semantic implications, also known as wordplay, resulting in casual transliterations”. However, this situation becomes more serious with the invention of computer that represents a historic turning point and a qualitative leap in the lives of all humanity, whether at the technological, social, or other related levels (Kuo, et al, 2007: 3).

Implications of transliteration

The transliteration technique is crucial for languages with non-Latin scripts, enabling communication across linguistic and cultural boundaries. It involves the automatically transforming a grapheme's transcription from one writing system to another, while maintaining its pronunciation. It is typically used in the context of “machine translation and cross language retrieval”, mostly to deal with the issue of “named entities and technical terms” (Younes, et al: 2018: 238).

Although translation primarily involves transferring meaning from one language to another, sometimes literal transliteration is necessary for a complete translation. In the field of marketing, for example, translators resort to transliteration when translating brand or product names, preserving the original pronunciation in the source language when translating them into the target language. Transliteration is also of great importance in the translation of official documents and papers, due to the sensitivity of correctly translating names into the target language.

The importance of transliteration is also evident in texts with a predominantly cultural character, such as folklore or literary texts that frequently contain the names of personalities or geographical locations. An example of the use of transliteration in such texts like transliteration exploited in the translation of the well-known Arabic tales "thousand night and night)

Transliteration is also important in translating religious texts. For example, the term “Zakat” is usually written in English as “Zakat” or “Zakah” instead of being translated, so that the term does not lose its Islamic meaning and connotations or get confused with another term such as “alms.” In Islam, the concept of Zakat is certainly different from that of charity. Zakat is a known obligation with a known percentage and is paid at known times, and it is not charity that can be paid at any time and in any amount.

Language Learning is one of the principal objectives of transliteration that can be used to help language learners read and write in a new language. in addition to that through data exchange, transliteration can be used to facilitate the exchange of data between different languages or scripts.

Furthermore, transliteration can ease writing through social media when users are unfamiliar with Arabic keyboards or sometimes their devices do not support writing in Arabic scripts, i e, Arabic keyboards are not available.

For example, the Facebook space, like other means and media, has been able to constitute a cultural and technological turning point in the lives of most modern societies, and to bring about a noticeable change in the environment in which people live, starting with imposing an unprecedented communication style within a space of wide dimensions in which each person has his own language and his own way of achieving this communication, and this new development is in itself a challenge facing all languages(Al-Jarf, 2022).

Furthermore, the Google Transliteration Tool is a widely used platform for converting Arabic text into the Latin alphabet. However, the tool has been criticized for its lack of brevity and accuracy, particularly in it does not rely on a unified rules or pronunciation in its foundations or databases that it works on. This research aims to investigate the effectiveness of Google Transliteration of Arabic and propose improvements to enhance its brevity and accuracy relying on pronunciation as well.

What are the systems used for Arabic transliteration?

Concerning the Arabic language, many systems for transliteration rules are established, and their methods have relatively varied. Therefore, more than one system has emerged. Although international parties have worked on constructing a unified global system for writing sounds and transferring them through recommending, the using of the Latin characters as a unified representation of sounds, there is no unified agreement on how to represent some Arabic letters (such as ع, غ, ص, ط, ذ, ش, ح, خ, ذ) in Latin letters,

(such as English, French, Spanish, Italian, German, Dutch, and others). However, there is a consensus, or near-consensus, on how to represent the remaining letters. The Spanish Arabist School (SAS) that is developed by a team of Spanish orientalists led by the historian Jose Antonio Conde (1766-1820 find a unified standard for dealing with Arabic names, since Andalusia symbolizes many centuries of current Spanish history. Under the supervision of Paul Passy, the "International Phonetic Alphabet (IPA)" was founded by the "International Phonetic Association in (1859-1940) in 1336 AD", with the assistance of a group of phoneticians, most of whom were English and French. This alphabet is primarily constructed on the well-known Roman alphabet, although it includes very unusual symbols from Greek and other languages. "The Standard Arabic Technical Transliteration System (SATTS)" is a system used by "Western military institutions" to convert Arabic messages into symbols compatible with Morse code. This (Code) continues to be the most important resources of communication for a long time, but it has now disappeared. "The International Organization for Standardization (ISO)" has established standards for transliteration in a series of editions. The first was ISO/R 233 in 1161 AD, which was modified in 1132 AD, and the final version, known as ISO 233-2, was delivered in 1118 AD. This system was approved by the "United Nations in 2017" to standardize "geographical names", based on the system adopted by "Arabic language experts" at a conference held in Beirut in 2007. "The Library of Congress" that established in 1997 "has several advantages, including assigning each Arabic letter its equivalent in Latin letters, without neglecting a single letter. “As for vowels, they have specific letters that do not change, as does the extension of alif, waw, or ya. This method also addresses doubling, tanween, and similarity of letters, and eliminates unnecessary extra letters."

Modern Standard Arabic (MSA)

Arabic language has various variants; the formal language which is called “Modern Standard Arabic (MSA) and the Dialectal Arabic (DA)” which differs from one Arabic country to another. Arabic dialects are grouped into six categories: Egyptian, Levantine, Gulf, Iraqi, Maghrebi and others (Zaidan and CallisonBurch, 2014).

MSA is the universal language of the Arab world. It is a direct descendant of Classical Arabic. MSA is used in formal speaking situations, such as sermons, lectures, news broadcasts, and speeches, and in all formal writing such as “official correspondence, literature and newspapers”. Most cultured Arabic people learn it during formal schooling, although many Arabs without formal schooling in MSA can understand it to a greater or lesser degree. “MSA is quite uniform throughout the Arab world and serves as a *lingua franca* for speakers of various colloquial dialects, many of whom might otherwise be unable to communicate with each other”. Modern Standard Arabic contains (28) letters, (18) letters are common in both of Arabic and English as depicted in table (1), in addition to (10) letters that are not found in English as shown in table (2).

Despite the fact that the researcher of this study is Iraqi, but she chooses to investigate transliteration in Modern Standard Arabic, which is regarded as lingua franca among the Arabic speaking countries in order to set the ground for a unified standard tackling for Transliteration of Arabic all over the world.

Table (1) MSA Shared Consonants (exist in English)

S	Consonants	Arabic letters	Arabic example with its meaning	English example
.1	**/b/**	ب	**/beit/** house بيت	baby
.2	**/t/**	ت	**/teqreer/** report تقرير	table
.3	**/θ/**	ث	**/θemer/** fruitage ثمر	thief
.4	**/ʤ/**	ج	**/ʤamal/** camel جمل	John
.5	**/d/**	د	**/deleel/** evident دليل	duty
.6	**/ð/**	ذ	**/ ðeheb**/gold ذهب	this
.7	**/r/**	ر	**/rejul**/man رجل	ring
.8	**/z/**	ز	**/zeit**/oil زيت	zebra

.9	**/s/**	س	**/sooq/**car سوق	single
.10	**/ʃ/**	ش	**/ʃamikh/** proudشامخ	sheep
.11	**/f/**	ف	**/ferhan/** happyفرحان	few
.12	**/k/**	ک	**/kita:b/** bookكتاب	key
.13	**/l/**	ل	**/leil/** nightليل	library
.14	**/m/**	م	**/muslim/** Muslimمسلم	miror
.15	**/n/**	ن	**/nebeel/** nobleنبيل	normal
.16	**/w/**	و	**/werd/** roseورد	weather
.17	**/h/**	ه	**/ha:ða:/** thisهذا	home
.18	**/j/**	ى	**/jesruq/** stealيسرق	yesterday

To the best of the researcher knowledge, there is no problem in transliterating the (18) shared consonant sounds between Arabic and English. The problematic issues arise from the ten consonant sounds that do not exist in English. Here in, phonology comes to bridge the gap of the (10) consonant sounds that are not found in English. For instance, when foreigners try to pronounce words having these sounds, they face difficulty in pronouncing them properly. Thus, they pronounce and write them according to what is easy on / is ط/ in Arabic is pronounced as /h/ by them, consonant / حtheir tongues, for example, the consonant / / is pronounced as /s/, etc.صpronounced as /t/, consonant /

Table (2) MSA Different Consonants (not exist in English)
(Adapted from Jabbari, 2012)

s	Con.	Arabic Letter	Arabic Example	Meaning
.1	**/ sˤ/**	ص	**/sˤaba:h/**صباح	Morning
.2	**/ dˤ/**	ض	**/ dˤajf/**ضيف	Guest
.3	**/tˤ/**	ط	**/tˤa:lib/**طالب	Student
.4	**/ ðˤ/**	ظ	**/ ðˤarf/**ظرف	Envelope
.5	**/ʔ/**	ا ئ ئ	**/ ʔana/**انا ا	I
.6	**/ʕ/**	ع	**/ʕajn/**عين	Eye
.7	**/ɤ/**	غ	**/ɤadan/**غدا	Tomorrow
.8	**/x/**	خ	**/xa:l/**خال	Uncle
.9	**/q/**	ق	**/qari:b/**قريب	Relative
.10	/ħ/	ح	**/ ħabi:b/** حبيب	lover

Any transliteration between any two languages is based on similarity. In turn, similarity is greatly based on consonants since vowel correspondences across languages tend to be less predictable. Specifically, when we know that vowels are often not represented in all languages like English Kirschenbaum and Wintner (2010).

To determine consonant correspondences between Arabic and English, a simple table has been constructed relying on common knowledge patterns that relate sound to spelling in both languages. Every entry in the mapping table consists of an Arabic letter and a possible English consonant or consonants sequence that

might match it. To depict a picture of Arabic consonant sounds (28) and their counterpart consonants in English that includes both shared and not shared letters, see table (3).

Table (3) Arabic consonants and their English counterpart consonant(s) in English

s	Arabic letters	Phoneme(s)	s	Arabic letters	Phoneme(s)
.1	ب	b	**15.**	ن	n
.2	ت	t	**16.**	و	w
.3	ث	th	**17.**	ه	h
.4	ج	J	**18.**	ي	y
.5	د	d	**19.**	ص	s
.6	ذ	th	**20.**	ض	dh
.7	ر	r	**21.**	ط	t
.8	ز	z	**22.**	ظ	dh
.9	س	s	**2.**	ا ئ ئ	i
.10	ش	sh	**24.**	ع	ʕ
.11	ف	f	**25.**	غ	gh
.12	ک	k	**26.**	خ	kh
.13	ل	l	**27.**	ق	q
.14	م	m	**28.**	ح	h

Problematic Areas in Transliteration

Vowel Mismatches

In term of vowels, the Arabic language contains the short movements that are the nearest in pronunciation to the short vowels in English and the long vowels, unlike the English language that contains vowels only (long/short). However, this case leads to a serious confusion and embarrassment in pronouncing certain close names, for example the female name that contains the long vowel /a:/ ( ) and the male name that انوار contains the movement (fetha) ( ) are transliterated erroneously into (Anwar) in both cases which is a female name, i e, the long vowel /a:/ and the (fetha) are transliterated by using the same letter (a) in the above example. Nevertheless, the Arabic vowel system is shown in table (4).

Table (4) Arabic Vowels and their correspondences in English (Adapted from Jabbari, 2012)

Vowels	Arabic Vowels	English Correspondences	Arabic example with its meaning
Short Vowels (movements)	ـَ	/e/	نَحن/ nehnu/ we
	ـِ	/i/	مِن/ min/ from
	ـُ	/u/	غُرفة/ ʁurfa/ room
Long Vowels	ا	/a:/	باب/ ba:b/ door
	و	/u:/	صابون/ sˤa:bu:n/ soap

	ي	/i:/	/ fi:/ in, atفي
Diphthong	أو	/əʊ/	/ jawm/ day يوم
	أي	/ei/	/ ðʕajf/ guest ضيف
	آي	/ai/	nai/ناي/ flute

Relying on the pronunciation of the above vowel sounds system of Arabic (table 4), the researcher uses the following Arabic vowels and their English counterpart vowels in her transliteration of the data in this study as shown in table (5).

Table (5) Arabic vowels and their English counterpart letters

	Vowel	**Arabic letter**	**Phoneme(s) used in transliteration**
Short Vowels	/e/	ـَ	e
	/i/	ـِ	i
	/u/	ـُ	u
Long Vowels	/a:/	ا	a
	/u:/	و	oo in the middle u at the end
	/i:/	ي	ee in the middle i at the end
Diphthong	/əʊ/	أو	aw
	/ei/	أي	ei
	/ai/	آي	ai

ِ) in Arabic -Consequently and in the same path, a differentiation must be made between short /i/ (kesra) (and long /i:/ (long vowel in Arabic) where Google Transliteration Tool uses the letter (i) for both cases, as) (in text no 1) transliterated as (tushir) and (yumkin) respectively. According يُمكن) and (تُشير in the words (the researcher new perspective, the first word must be transliterated as (tush**ee**r) in order to make difference between the long /i:/ and short /i/sound that is found in(yumk**i**n).

ُ), it will be transliterated as (u), but when it is prolonged, i. e. -As for the Arabic movement (thema) /u/(there is long /u:/ it will be transliterated as (oo).

The case is that Google often uses *a, i, u* for all short and long vowels, losing distinctions. The following words show Google's tendency to oversimplify vowel sounds, versus a more phonetically faithful transliteration.

Arabic	**IPA**	**Google**	**Correct**	**Notes**
كَتَب	/kætæbæ/	*kataba*	*keteba*	Here Google writes **(a)** for fetha in both syllables. Using (e) as in *keteba* more accurately reflects the (fetha) movement. Learners seeing "kataba" might misread it as /ka/ or /ka:/, altering pronunciation.
كَبِير	/kaˈbiːr/	*kabir*	*kebeer*	Google uses short /a/ and long /iː/, in writing (kabir). The corrected (kebeer) (double "e") shows the long /iː/. Without it, learners may say a short /i/ sound, losing vowel length distinction.

بيت	/biːt/	*bait*	*beit*	The Arabic diphthong /ei/ is here, but Google uses (ai) (bait), where sound like /ei/ can be more correct alternative. Misreading *(bait)* may lead learners to an /aɪ/ diphthong instead of /ei/ diphthongs.

These vowel errors can cause learners to pronounce words with incorrect vowel quality or length. For example, writing (a) short a instead of (e) for fatha may mislead a student into saying /a/ instead of /e/ (as in "bat" vs. "bet" in English). Over time, this distorts understanding of Arabic vowel sounds, hindering speaking and listening skills.

Stop Overusing of the Consonant (a)

To give more details about the overuse of the consonant (a) by Google Tool, it is noted that this tool treats ◌َ) and the vowel sound /a/ (whether short or long) equally where -the short Arabic movement /e/ (fetha) (both cases are transliterated as (a). Concerning the short vowel sound (fetha) which is pronounced as /e/ in Arabic, it has a counterpart short vowel sound /e/ in English then why Google Transliteration Tool uses the consonant (a) instead, a case which erroneously tells learners of Arabic that it is pronounced as /a/ or /aː/ in all cases. These vowel errors can cause learners to pronounce words with incorrect vowel quality or length. For example, writing a short /a/ instead of /e/ for (fatha) may mislead learners into saying /a/ instead of /e/ (as in "bat" vs. "bet" in English). Over time, this distorts understanding of Arabic vowel sounds, hindering speaking and listening skills of foreign learners of Arabic.
All in all, the letter (a) is overused instead of the movement (feha), short /a/, and long /a/.
) in Arabic which makes ع Most importantly, this consonant is also used as a counterpart for the consonant (more confusion in pronunciation. To lessen this overuse of (a) and be more accurate in transliteration, the present analysis will use the sound /e/ referring to the Arabic movement (fetha) since it has the same sound quality of the short vowel sound /e/.

Consonant Misrepresentation

Errors also occur with certain consonants, especially glottal and emphatic sounds. Below are cases where Google's output omits or alters a critical consonant marker.

Arabic	**IPA**	**Google**	**Correct**	**Notes**
رأس	**/raʔs/**	**ras**	**ra's**	The word رأس) head) contains a glottal stop (hamza / ʔ/) between ra and s. Google's ras omits it. Writing ra'as (with an apostrophe) shows the hamza. Learners might otherwise skip the glottal stop, merging syllables (/ras/), which changes rhythm and meaning .in Arabic
مدرسة	**/ madrasah/**	**madrasa**	**medreseh**	often ,(ـة) (The final letter is (ta marbooṭa pronounced /ah/. Google's transliteration of (madrasa) drops the "h". Using madrasah preserves the consonant 'h', reminding learners of the /t/ sound (especially important in formal reading). Omitting it can make the word sound more like "madrasa" in Egyptian dialect, potentially confusing .learners about the feminine ending

Omitting the glottal stop or final -h can significantly change pronunciation. Learners may not realize a consonant was lost and pronounce the word incorrectly (e.g. /ras/ instead of /raʔs/, /madrasa/ instead of / madrasah/). Such errors obscure essential phonetic information. Recognizing hamza (ʔ) and (ta marbooṭa) (h) is crucial for understanding and correct pronunciation of many Arabic words.

) in Arabic which ع Significant to note that the vowel /a/ is also used as a counterpart for the consonant (is transliterated as (al-awatif) العواطف makes more confusion in pronunciation, for example the word ((

) that is /ʕ/. Lacking an appropriate equivalent عwith the consonant (a) instead of the (IPA) symbol for ( ) that is ع), it is better for Google transliteration to stick on using the (IPA) symbol for (عletter for Arabic (/ʕ/ for obtaining more accuracy and precision.

The use of the definite article (al-) in the Arabic

At first, it is important to know that in Modern Standard Arabic there are two groups of letters. The (sun) letters are the letters that do not pronounce the consonant /l/ in the definite article (al) al-ta'reef when it is added to them, and are stressed, and the (moon) letters which, are the letters that pronounce the consonant ,ت/l/ in the definite article (al) al-ta'reef when it is added to them, and are not stressed. The sun letters are (ث, د, ذ, ر, ز, س, ش, ص, ض, ط, ظ, ل, ن) ي, و, ح, م, ك, ق, ف, غ, ع, خ, ح, ج, ب, ا), and the moon letters are (
(Beraj, 2011: 5).

In this path, Al-Jarf (2022) explores a significant area of Arabic transliteration. More specifically, she deals with transliteration of first and last names contain the definite article (al-) in Arabic scripts and how it is transliterated before sun and moon letters by speaker of Arabic on Facebook. She reveals that (al-) is utilized in 55% of the names, and (il-) is used in one name only and (el-) is employed in 44%. Sometimes, the (el-) is reduced to only (l-) in 1%.

In addition, Al-Jarf (2022) states that (in her study about the transliteration of names on Facebook) forty percent of the name that follows the definite article starts "with a sun (coronal) consonant (Al-Salem; Attaher) as opposed to 60% of the names that begin with a moon letter (Alomari, Aljarf)". Finally, the investigation recommends a strategy for transliterating the definite article where the following name begins with a sun (coronal) letter based on the English grapheme-phoneme correspondence rules to enable non-native speakers of Arabic to pronounce the transliterated al+ noun accurately. She recommends that:

"The definite article be spelled as part of the word in the case of moon letters following the articles as in Aljarf, Algudah, Alghamdi, Alhussain, Aljanabi, Alkasm, as the definite article is spelled as part of the noun in Arabic. In the case of sun (coronal) letters that follow the definite article, the English transcription should show the change that takes place as a result of the assimilation process in which the /l/ is deleted from the definite article and the sun consonant is geminated".

(“al-”) behaves differently before sun vs. الSpecific to the current research the Arabic definite article (*wa-* “and”). Google’s transliteration sometimes fails to reflect these وmoon letters, and when preceded by rules, leading to confusion for example:

Arabic	**IPA**	**Google**	**Correct**	**Notes**
الشَّمْس	/aʃ-ʃams/	*al-shams*	*ash-shams*	(shams) is a sun-letter; the *l* assimilates to sh, شمس doubling it. Google’s *al- shams* does not show assimilation. The corrected *ash-shams* (double “sh”) signals the change. Misreading “al-shams” may lead learners to pronounce the first consonant wrongly or miss the doubled /ʃ/.
السَّابِق	/as-sa:biq/	*al-sabiq*	*as-sabiq*	(sabiq) begins with sun-letter s. The correct سابق form *as-sabiq* (double “s”) reflects the merged sound. Google’s *al-sabiq* ignores assimilation. This can mislead learners into pronouncing the /l/ or not doubling /s/, which is incorrect.

وَالاخْتِبَار	/wal-ʔikhtibɑːr/	*wal-ikhtibar*	*wel-ikhtibar*	When *wa-* (“and”) precedes *al-*, native speakers often drop the **a** in *al-* (pronouncing /l/). Google’s *wal-ikhtibar* includes the full al-. The corrected *wel-ikhtibar* uses **e** and merges *wa+al*. This signals the contracted sound. Otherwise learners might insert an extra /a/ sound, making it / wal-/, which isn’t how it’s pronounced in context.
و المقترحات	/wal muqtarahat/	wal-muqtarahat	wel-muqterehat	Similar to the above, wal- should contract before al-. Google’s wal-muqterahat is missing this nuance. Writing wel muqterahat indicates the merged article. Mispronunciation here could lead to an unnatural pause or extra vowel between (we) and (al-).

- confuses both spelling and sound. For learners, seeing “al-” vs “a-” can mask the الIncorrect handling of important rule that makes pronunciation smooth. It may also affect recognition of words (e.g. realising as “ash-shams,” not “al-shams”). Properly indicating assimilation (like *ash-shams* or *as- sabiq*) helps الشمس -, noting the contraction (using “wel-” ال+وlearners apply pronunciation rules correctly. In phrases with instead of “wal-”) reflects actual speech and eases learning of word boundaries.

In the current analysis, the researcher employs the hyphenated definite article (al-) most times unless it is) which are transliterated by merging it والمقترحات) and (والاختبار) as in text no.(2), the words (وpreceded by ( ) and pronounced as (l-) only: (wel-ikhtibar) and (wel-muqterehat) in both وwith the conjunction (examples after deleting the (a) of (al). The reason behind this phenomenon is that native speakers of Arabic do that for ease of pronunciation and for accuracy of transliteration.

Data and methodology

The researcher has randomly collected the Arabic extracts from her own database related to abstracts of her postgraduate students translated by using the Google Translation Tool. Google’s transliteration output is obtained (via Google Translate web tool). When translating texts, the Google Tool also provides its users with transliteration outputs.

The researcher-conducted analysis is based on Modern Standard Arabic where the transliteration is explained through the following of certain procedure: An Arabic data analysis is done by following a manual phonetic-based transliteration of Arabic into English according to the researcher new perspective. By using the comparative approach, a comparison is done between the two transliterated versions (the traditional Google and the new transliterations).

However, the focus is on the words which are considered “negative examples” since they are transliterated according to Google Tool (questionable) perspective. However, the focus is on words that contain the short movement (fetha) (e), long vowel /i:/and long vowel /u:/ and how are wrongly transliterated by providing the correct transliteration according to researcher new perspective. As for consonants, the focus is on transliterating the sound / ʕ, ð, dh/ consonants because they constitute a problematic area in pronunciation and consequently in transliteration.

Text no. (1)

ظاهرة التلاعب العاطفي تشير إلى استخدام الأفراد للعواطف الخاصة بالآخرين بطريقة مكملة لأهدافهم الشخصية، وقد تكون هذه السلوكيات غير أخلاقية وتسبب آثاراً سلبية على العلاقات الشخصية قد تكون هذه الظاهرة موجودة بين طلبة الجامعة، حيث يمكن للأفراد استخدام العواطف لتحقيق أهدافهم الشخصية أو الاجتماعية. يُشير ذلك إلى أهمية فهم العلاقات العاطفية وتعزيز التوعية للوقاية من تداول العواطف بطرق غير صحية بين طلبة الجامعة في السياق الجامعي.

Table (1)

Dhahiret al-telaʕub al-ʕatifi **tusheer** ila istikhdam alafrad lilʕewatif alkhaseh bil-akhereen bitereeqeh mukemileh li-ahdafihim al-shekhsia weqed tekun hathih al-sulookiat gheir akhlaqia wetusebib atharen selbia ʕla al-ʕilaqat al-shekhsia, qed tekun hathih aldhahireh mewjoodeh bein telebet al-jamiʕeh, heith **yumkin** lilafrad istikhdam al-ʕwatif li-tehqeeq ahdafhum al-shekhsia wel-ijtimaʕia. Yusheer thalik ila ahemiat fehm al-ʕilaqat al-ʕatifia weteʕzeez al-tewʕia lilwiqayeh min tedawil al-ʕewatif bituriq gheir sihia bein telebet al-jamiʕeh fi al-siyaq al-jamiʕi	zahirat altalaeub aleatifii **tushir** 'iilaa aistikhdam al'afrad lileawatif alkhasat bialakhirin bitariqat mukamilat li'ahdafihim alshakhsiati, waqad takun hadhih alsulukiaat ghayr 'akhlaqiat watasabub atharaan salbiatan ealaa alealaqat alshakhsiat qad takun hadhih alzaahirat mawjudat bayn talabat aljamieati, hayth **yumkin** lil'afrad aistikhdam aleawatif litahqiq 'ahdafihim alshakhsiat 'aw alaijtimaeiat yushyr dhalik 'iilaa 'ahamiyat fahm alealaqat aleatifiat wataeziz altaweiat lilwiqayat min tadawul aleawatif bituruq ghayr sihiyat bein talabat aljamieia fi alsiyaq aljamieii.

Vowel transliteration errors found in Google Transliteration Tool in comparison to the new perspective in this research.

1. Using (a) instead of (e) in transliterating the (fetha) short /e/ in (37) words. Instead, the researcher recommends the use of /e/ in transliterating the (fetha) since it is closer in pronunciation than /a/ and (a) for transliterating short /a/ and long /a:/.

2.Using (i) in transliterating the long /i:/ in (6) words. Instead, the researcher recommends the use of /i/ in transliterating the (kesra, short / i/) and using (ee) for transliterating long /i:/, unless the long /i:/ is located at the end of a word. Then, it is better to use (i).

3.Using (u) in transliterating long /u:/ in (2) words. Instead, it is better to dedicate the use of (u) to refer to (thema) /u/ and (oo) to refer to long /u:/.

Consonant transliteration errors found in Google Transliteration Tool in comparison to the new perspective in this research.

) in (15) words.ع1. Using (a) instead of (ʕ) in transliterating **(**

) in (2) transliterated words. Instead, the researcher recommends ظ2. Using (z) to refer to the consonant (using (dh), because using (z) is so far from it in pronunciation. To the best knowledge of the researcher, pronouncing /z/ in such words is specific to the Egyptian dialect.

3.Using (dh) instead of (th) to refer to the consonant (**/ð/**) in (3) instances where the use of (th) is closer to its pronunciation in Arabic than using (dh).

Text no. (2)

المستخلص: يستهدف البحث الحالي الى التعرف على:

1. الترابط المؤلم لدى النساء المعنفات.

2. الفرق في الترابط المؤلم لدى النساء المعنفات على وفق متغير الحالة الاقتصادية (موظفة – غير موظفة)

ولتحقيق اهداف البحث قام الباحث ببناء مقياس لقياس الترابط المؤلم لدى النساء المعنفات وفقا لنظرية داتون وبينتر Dutton & Painter (1981). بعد استخراج خصائصه السيكومترية من صدق وثبات تم تطبيق المقياس على عينة البحث البالغة (80) أمراءه معنفة تم

اختيارهن بصورة عشوائية. وبعد استخدام الوسائل الاحصائية المناسبة مثل الاختبار التائي لعينة واحدة والاختبار التائي لعينتين مستقلتين ومعامل ارتباط بيرسون تمت معالجة البيانات احصائيا وتم التوصل الى النتائج الآتية:

1. ان عينة البحث من النساء المعنفات لديهن ترابط مؤلم.

2. هناك فرق في الترابط المؤلم لدى النساء المعنفات لصالح غير الموظفات. أي أن غير الموظفات يعانين من الترابط المؤلم أكثر من الموظفات.

وفي ضوء نتائج البحث خرج البحث بعدد من التوصيات والمقترحات.

Table (2)

Al-mustekhles: yestehdif al-behth al-hali ila al-teʕerif ʕla: 1.al-trabut al-mulim leda al-nisaa al-muʕnefat. 2.al-feriq fi al-trabut al-mulim leda al-nisaa al-muʕnefat ʕla wifiq mutegheir al-haleh al-iqtisadia (muwethefeh/ gheir muwethefeh). Welitehqeeq ahdaf al-behith qam al-bahith bibinaa miqias liqias al-trabut al-mulim leda al-nisaa al-muʕnefat wifqen linetheriat Datoon wePeinter (1981). Beʕd istikhraj al-khesais al-saikometria min sidiq wethebat tem tetbeeq al-miqias ʕla ʕeinet al-behith al-baligheh (80) imria muʕenefeh tem ikhtiarehum bisureh ʕeshwaia webeʕd istikhdam al-wesail al-ihsaiya al-munasibeh mithl al-ikhtibar al-taii liʕeineh wahideh **wel-ikhtibar** al-taii liʕeinetein musteqletein wemuʕamil ikhtibar person temet muʕalejet al-bianat ihsaian wetem al-twesul ila al-netaiij al-talia:1.Ina ʕeinet al-behith min al-nisaa almuʕenefat ledeihin trabut mulim. 2.Hunak ferq fi al-trabut al-mulim leda al-nisaa al-muʕenefat lisalih gheir al-muwethefat, ei ina gheir al-muwethefat yuʕanen min al-terabut al-mulim akther min al-muwethefat. wefi dhew netaij al-behith kherej al-behith biʕeded min al-tewsiat **wel-muqterhat**.	almustakhlasi: yastahdif albahth alhalii ila altaerifa alaa: 1. altarabut almulim ladaa alnisa' almuenafati. 2. alfiraq fi altarabut almulim ladaa alnisa' almuenafat ealaa wifq mutaghayir alhalat alaiqtisadia (muazafatan – ghayr muazafatin) walitahqiq aihdaf albahth qam albahith bibina' miqyas liqias altarabut almulim ladaa alnisa' almuenafat wifqan linazariat atum wabintar Dutton & Painter (1981). baed aistikhraj khasayisih alsaykumitriat min sidq wathabat tama tatbiq almiqyas ealaa eayinat albahth albaligha (80) 'umara'ah maenifat tama aikhtiaruhuna bisurat eashwayiyatin. wabaed aistikhdam alwasayil alahisayiyat almunasibat mithl alaikhtibar altaayiy lieinat wahidat walaikhtibar altaayiy lieaynatayn mustaqilatayn wamaeamil airtibat birsun tamat muealajat albayanat aihisayiyana watama altawasul alaa alnatayij alatyat:1. an eayinat albahth min alnisa' almuenafat ladayhina tarabut mulim. 2. hunak faraq fi altarabut almulim ladaa alnisa' almuenafat lisalih ghayr almuazafati. 'ay 'ana ghayr almuazafat yueanin min altarabut almulim 'akthar min almuazafati. wafi daw' natayij albahth kharaj albahth bieadad min altawsiat walmuqtarahati.

Vowel transliteration errors found in Google Transliteration Tool in comparison to the new perspective in this research.

1. Using (a) instead of (e) in transliterating the (fetha) short /e/ in (**87**) words.

2.Using (i) in transliterating the long /i:/ in (2) words.

3.Using (u) in transliterating long /u:/ in (1) words.

Consonant transliteration errors found in Google Transliteration Tool in comparison to the new perspective in this research.

) in (20) words.ع1. Using (a) instead of (ʕ) in transliterating **(**

) in (5) transliterated words. ظ2. Using (z) to refer to the consonant **(**

Text no. (3)

مستخلص البحث: يستهدف البحث الحالي:

-قياس مستوى المناخ المدرسي لدى طالبات المرحلة الاعدادية وفق متغير التخصص.

-قياس مستوى التمكين النفسي لدى طالبات المرحلة الاعدادية، وفق متغير التخصص.

-التعرف على العلاقة ما بين المناخ المدرسي والتمكين النفسي.

وقد اقتصر البحث الحالي على دراسة المناخ المدرسي وعلاقته بالتمكين النفسي لدى طالبات المرحلة الاعدادية، وتكونت عينة البحث الحالي من (200) طالبة اختيروا بالاسلوب الطبقي العشوائي من ثلاث مديريات الرصافة /3/2/1 في المحافظة ولغرض تحقيق أهداف البحث الحالي، قامت الباحثتان بالإجراءات الآتية:

- تبني مقياس المناخ المدرسي مكون من (40) فقرة

-تبني مقياس التمكين النفسي مكون من (20) فقرة، وقد اعتمدت الباحثتان مؤشرات الصدق الظاهري أما ثبات المقياس، فقد حسب بطريقة التجزئة النصفية وتم تصحيح المعامل بواسطة معادلة سيبرمان –براون . وبعد تطبيق أدوات البحث واستعمال الوسائل الإحصائية المناسبة ، توصل البحث للنتائج الآتية:

-إن طالبات المرحلة الاعدادية في هذه المديريات الثلاثة من الرصافة الاولى يتمتعون بمناخ مدرسي بدرجة مرتفعة.

-إن طالبات المرحلة الاعدادية في هذه المديريات الثلاثة من الرصافة الاولى يتمتعون بمستوى عال من التمكين النفسي

لم يظهر لنوع التخصص (العلمي والادبي) أثراً ذات دلالة احصائية في مستوى المناخ المدرسي والتمكين النفسي .

-توجد علاقة بين المناخ المدرسي والتمكين النفسي لدى الطالبات المرحلة الاعدادية .

وفي ضوء النتائج التي توصل إليها البحث الحالي، والاستنتاجات تقدمت الباحثتان ببعض المقترحات و التوصيات .

الكلمات المفتاحية :(المناخ المدرسي)،(التمكين النفسي) ،(طالبات الاعدادية)

Table (3)

Mustekhles al-behith: yestehdif al-behth al-hali: Qias mustewa al-menakh al-medresi leda talibat al-merheleh al-iʕdadia wifiq mutegheir al-tekhesus. -Qias mustewa al-temkeen al-nefsi leda talibat al-merheleh al-iʕdadia wifiq mutegheir al-tekhesus. -Al-teʕurif ʕla al-ʕlaqeh bein al-menakh al-medresi wel-temkeen al- nefsi. Weqed iqteser al-behth al-hali ʕela diraset al-ʕilaqeh bein al-menakh al-medresi wel-temkeen al-nefsi leda talibat al-merheleh al-iʕdadia wifiq mutegheir al-tekhesus, wetekwenet ʕeinet al-behth al-hali min (200) talibeh ikhteru bilisloob al-tebeqi al-ʕeshwaii min thelath muderiat al-rusafeh 1, 2, 3 fi al-muhafedheh we ligheredh tehqeeq ihdaf al-behth qamet al-bahethtan bilijraiat al-talia: -Tebeni miqias al-menakh al-medresi, mukewen min (40) feqereh. - Tebeni miqias al-temkeen al-nefsi, mukewen min (20) feqereh. Weqed iʕtemedet al-bahithetan ʕla muishirat al-sidq al-dhahiri ama thebat al-miqias feqed husib bitereeqet al-tejzieh al-nisfiah wetem tes-heeh al-muʕamil biwasitet muʕadelet Sperman-Brawn. webeʕd tatbeeq adwat al-behth we-istikhdam al-wasail al-ihsaia al-munasibeh, twesel al-behith lilnetaij al-atiya: -Ineh talibat al-merheleh al-iʕdadiah fi hatheh al-mudeeriat al-thelatheh fi al-rusafeh al-thalitheh yetemetʕoon bimenakh	mustakhlis albahth yastahdif albahth alhalia: qias mustawaa almunakh almadrasii ladaa talibat almarhalat alaeidadiati. wifq mutaghayir altakhasusi- -qyas mustawaa altamkin alnafsii ladaa talibat almarhalat alaeidadiati, wafq mutaghayir altakhasus waltamkin alnafsiu taerif alealaqat ma bayn almunakh almadrasii - waqad aiqtasar albahth alhaliu ealaa dirasat almunakh almadrasii waealaqatih bialtamkin alnafsii ladaa talibat almarhalat alaedadiat ,wtkunt eayinat albahth alhalii min (200) talibat aukhtiruu bialauslub altabaqii aleashwayiyi min thalath mudiriaat alrasafat /1/2/3 fi almuhafazat waligharad tahqiq 'ahdaf albahth alhalii , qamat albahithatan bial'iijra'at alatiati: - tabniy miqyas almunakh almadrasii mukawan min (40)faqra - tabni miqyas altamkin alnafsii mukawan min (20) faqrat , waqad aietamadat albahithatan muashirat alsidq alzaahirii 'amaa thabat almiqyasi, faqad hasab bitariqat altajziat alnisfiat watama tashih almaeamil biwastat mueadalat sibirman -brawun . wabaed tatbiq 'adawat albahth waistiemal alwasayil al'iihsayiyat almunasibat , tawasal albahth lilnatayij alati: 'iina altaalibat almarhalat alaeidadiat fi hadhih almudiriaat althalathat min alrasafat alawlaa yatamataeun bimunakh

medredi biderejeh murtefʕeh.-Ineh talibat al-merheleh al-iʕdadiah fi hatheh al-mudeeriat al-thelatheh fi al-rusafeh althalitheh yetemetʕoon bimustewa ʕali min al-temkeen al-nefsi. Lem yedhher linuʕ altekhusis (al-ʕilmi wel-adebi) ather that delaleh ihsaiya fi mustewa al-menakh al-medresi wel-temkeen al-nefsi. -Tujed ʕilaqeh bein al-menakh al-medresi wel-temkeen al-nefsi leda talibat al-merheleh al-iʕdadia. Wefi dhewi al-netaij aleti tewesel leha al-behth al-hali welistintajat teqedemet al-bahithetan biʕeded min al-tewsiat wel-muqterhat. al-kelimat al-miftahia: al-menakh al-medresi, al-temkeen al-nefsi, talibat aliʕdadia.	madrasiin bidarajat murtafiea -'iina altaalibat almarhalat alaeidadiat fi hadhih almudiriaat althalathat min alrasafat alawlaa yatamataeun bimustawa eal min altamkin alnafsii lam yazhar lilnawe altakhasus (aleilmiu waladibiu) athraan dhat dilalat aihisayiyat fi mustawaa almunakh almadrasii waltamkin alnafsii . . tujad ealaqat bayn almunakh almadrasii waltamkin alnafsii ladaa altaalibat almarhalat alaeidadia . wafi daw' alnatayij alati tawasal 'iilayha albahth alhalii, walaistintaj taqadamat albahithatan bibaed almuqtarahat w altawsiat . alkalimat almiftahiat :(almunakh almadrsi),(altamkin alnafsiu) ,(talibat alaedadia

Vowel transliteration errors found in Google Transliteration Tool in comparison to the new perspective in this research.

1. Using (a) instead of (e) in transliterating the (fetha) short /e/ in (215) words.

2.Using (i) in transliterating the long /i:/ in (13) words.

3.Using (u) in transliterating long /u:/ in (3) words.

Consonant transliteration errors found in Google Transliteration Tool in comparison to the new perspective in this research.

1. Using (a) instead of (ʕ) in transliterating **(ع)** in (27) words.

2. Using (z) to refer to the consonant **(ظ)** in (2) transliterated words.

3.Using (dh) instead of (th) to refer to the consonant (/**ð**/) in (2) instances where the use of (th) is closer to their pronunciation in Arabic than using (dh).

Text no. (4)

المُلخص: وظيفةُ هذا البحث هو إستكشافُ مُتغيري الجشطالتات غير المُشبعة والإستبصار والعلاقةَ بين هذين المتغيرين عند المرشدين التربويين، الجشطالتات غيرِ المُشبعةِ والإستبصار من المُتغيراتِ النفسيةِ التي طُرحتْ في نظرية "بيرلز"، الجشطالتات غيرِ المُشبعةِ هي حاجاتٌ غير مُشبعةِ ومشاعرِ غير مُعبر عنها.أما الإستبصار فهو إعادة الفرد لبناءِ خِبراتهِ بحيث يُصبح لها معنى جديداً غير المعنى السابق؛ ويرى "بيرلز" إنَّ سلوكنا كأفرادٍ هو نتاج لإدراك مُنظم في عقلِ الفرد بمجموعةٍ من القوانين كقانون التصنيف والتقابلِ والتماثلِ والتقاربِ والتجميع والتكامل وسد النقص او الأغلاق، وإنَّ عدم إشباع الجشطالتات والإستبصارِ بها يجعلها تُمارسُ ضغطاً على الفرد يُسببُ لهُ التوترِ والقلق؛ والجشطالتات غير المُشبعةِ عِندما تُشبعُ ويُستبصرُ بها تتحولُ الى وعيٍ وأرضيةٍ وخلفيةٍ يُمكن إستدعائهُا، وكانت النتائج ظهور لمتغير الجشطالتات غير المُشبعة و الإستبصار لدى عينةِ المرشدين ووجودِ علاقةٍ إرتباطيةٍ بينهما، وخلَّصَ البحث الى إستنتاج ومجموعة مُقترحاتٍ وتوصيات.

Table (4)

Almustekhles: Wedheefet hatha al-behith hwa istikshaf al-jeshtaltat gheir al-mushbeʕeh wealistibsar welʕilaqeh bein hathein al-muteqheirein ʕend al-murshideen al-terbewyeen, al-jeshtaltat gheir al-mushbeʕeh welistbsar min al-mutegheirat al-nefsia aleti turihet min qibl Berlz , al-jeshtaltat gheir al-mushbeʕeh hei hajat gheir mushbeʕeh wemeshaʕir gheir muʕeber ʕenha. Ama al-istibsar fhwa iʕadet al-ferd libinaa khibrateh biheith yusbih leha meʕna jedeeden gheir al-meʕna al-sabiq. weyera “Berlz” ina slookena ke-afrad hwa nitaj li-idrak munedhem fi ʕeql al-ferd bimejmooʕeh min al-qwaneen keqanoon al-tesneef welteqabul weltemathul welteqarub weltejmeeʕ weltekamul wesed alnequs aw al-ighlaq, we-ina ʕedem ishbaʕ al-jeshtaltat welistibsar biha yejʕelha tumaris dheghten ʕla al-ferd yusesbib lehu al-tewetur welqeleq, weljeshtaltat gheir al-mushbeʕeh ʕendema tushbeʕ weyustebser biha tetehuel ila weʕi weardhia wekhelfia yumkin istedʕauha, wekanet al-netaiij dhuhur li-mutegheiri al-jeshtaltat gheir al-mushbeʕeh welistibsar leda al-murshideen wewujood ʕelaqeh irtibatia beinehuma, wekhulis al-behith ila istintaj wemejmuʕet muqterehat wetewsiat.	almulkhs: wzyft hadha albahth hu 'istkshaf mutghyry aljishtalatat ghayr almushbet wal'iistibsar walelaqt bayn hadhayn almutaghayirayn eindalmurshidayn altarbawiiyn, aljashtalatat ghyr almushbet wal'iistibsar min almutghyrat alnfsyt alati turht fi nazaria "birlz", aljashtalatat ghyr almushbet hi hajat ghayr mushbet wmshaer ghayr muebr eanha.'ama al'iistibsar fahu 'iieadat alfard lbna' khibrath bihayth yusbh laha maenan jdydaan ghayr almaenaa alsaabiqi; wayaraa "birliz" 'inn sulukana kafrad hu nitaj li'iidrak munzm fi eql alfard bmjmwet min alqawanin kaqanun altasnif waltqabl waltmathl waltqarb waltajmie waltakamul wasadi alnaqs aw al'aghlaqi, w'inn eadam a'iishbae aljishtalatat wal'istbsar biha yajealuha tumars dghtaan ealaa alfard yusbb lh altwtr walqalaqa; waljashtalatat ghayr almushbet eindma tushbe wyustbsr biha tthwl alaa wey wardyt wkhlfyt yumkn 'istdeayhua, wakanat alnatayij zuhur limutaghayir aljashtalatat ghayr almushbet w al'iistibsar ladaa eynt almurshidin wwjwd ealaqat 'irtbatyt baynahima, wkhllas albahth alaa 'iistintaj wamajmueat muqtrhat watawsiatin.

Vowel transliteration errors found in Google Transliteration Tool in comparison to the new perspective in this research.

1. Using (a) instead of (e) in transliterating the (fetha) short /e/ in (123) words.

2.Using (i) in transliterating the long /i:/ in (7) words.

3.Using (u) in transliterating long /u:/ in (4) words.

Consonant transliteration errors found in Google Transliteration Tool in comparison to the new perspective in this research.

) in (24) words.ع1. Using (a) instead of (ʕ) in transliterating **(**

) in (3) transliterated words. ظ2. Using (z) to refer to the consonant **(**

3.Using (dh) instead of (th) to refer to the consonant (**/ð/**) in (2) instances where the use of (th) is closer to their pronunciation in Arabic than using (dh).

Results

In analyzing the English transliteration of the Arabic extracts that are manually transliterated into English. The linear function is accomplished for each extract, separately. A number of transliteration pairs are selected from each transliteration, and used as negative examples in the analyzing procedure. However, this is quite small corpus compared to previous approaches found in the literature concerning this topic such as Shazal et al (2020) or Al-Jarf. (2022). A total of (551) pairs represent the phonetic transliteration data which are analyzed using comparable approach, consisting of extracts in Arabic transliterated into target language (English). The transliteration task is performed by firstly tagging the Arabic texts, transliterating them according to the researcher perspective and then the problematic words are focused on and counted. According to the researcher new perspective among pronunciations of words on the syllable level, there are (500) errors representing vowel errors. Whilst (105) of all cases misrepresent single consonant. Overall, a

high percentage of the tokens contained pronunciation errors, which could trigger errors in transliteration. The table below reveals the total numbers of errors in vowels and consonants in Google transliteration tool.

Text no.	e	ee	oo	ʕ	dh	th	Total
1	37	6	2	15	2	3	65
2	87	2	1	20	5	0	115
3	215	13	3	27	2	2	262
4	123	7	4	24	3	2	163
Total	462	28	10	86	12	7	**605**

Conclusions

The analysis in this study engaged in comparative study that compares our approach to the state of the art. Two columns are made one for our approach transliteration and the other for Google Transliteration Tool. However, by scrutinizing the two, the aforementioned results show the size of errors in Google Transliteration Tool. However, this indicates that our approach gives better results and we expect that when the corpus data is larger, the results can be comfortably generalized. Furthermore, after analyzing the different errors that occur in the transliteration of Google, two principal reasons can be summarized: mismatches between sounds and letters in the system of Google transliteration tool and no unified and strictly followed rules. To avoid the transliteration errors and improve the readability of Arabic for foreign learners, a facilitated solution accessed by all is necessary for standard transliteration in Arabic. The researcher is looking for the most effective ways to facilitate the writing and reading of the Arabic language for foreign learners, enabling them to master it without fear or anxiety concerning facing difficulties in their path to learn it. However, it is believed that the matter will once again be easier if unified rules and guidelines for this purpose are established, which we must adhere to.

According to what have been mentioned previously, it is undoubtedly clear the extant of the importance that can be manifested as scientific and economic which reveals the necessity to stop this linguistic problematic issues in transliterating Arabic through incorporating the pronunciation-based mapping shown in table (5) into Google's algorithm" or "Update the tool so that (fetha) is transliterated as 'e', since it constitutes (75%) percent of errors (462). Nevertheless, the researcher hopes that the study findings will contribute to the development of more effective Arabic transliteration tools.

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