



RESEARCH ARTICLE

Phonological Awareness Levels at Saudi Electronic University: An Investigation of Saudi EFL University Students' Perspectives

Mohammad Husam Alhumsⁱ*

College of Science and Theoretical Studies, Saudi Electronic University, Saudi Arabia

ARTICLE INFO	ABSTRACT
Received: Apr 24, 2024 Accepted: Jun 22, 2024	<p>The required knowledge of phonological awareness initiates fundamental background of young and adult learners' reading skills. Literature asserted that few studies tackling EFL adult students' development in phonological awareness literacy particularly within Arab universities settings exist. Therefore, the aim of this research is to investigate the perspectives of Saudi EFL undergraduate students on phonological awareness levels. The research instrument used in this study was a cross-sectional questionnaire. Paired sample t- test, independent sample paired t-test, descriptive statistics, and one-way ANOVA were employed to analyze the data. The findings showed a relatively positive insight of most Saudi EFL undergraduate students' knowledge of phonological awareness levels. Another crucial finding was the significant disparity observed in Saudi EFL undergraduate students' awareness levels between phonological and phonemic awareness skills. Also, in terms of research variables, gender recorded an effect in favor of female participants, whereas academic level and GPA had no impact on participants' responses. Future research could employ qualitative methodology that probably provide more in-depth investigation of Saudi EFL undergraduate students.</p>
<p>Keywords</p> Phonemic Awareness Phonological Awareness Levels EFL Undergraduate Students Perspectives Saudi Electronic University	
<p>*Corresponding Author: husam101010@gmail.com</p>	

INTRODUCTION

Learners naturally practice sounds in their verbal communication before they initially begin working with printed words. In this stage, they are progressively developing the skill of phonological awareness (Hentasmaka et al., 2022). This skill involves a precise competence to manipulate and divide speech into smaller distinct sound constituents (Segawa, 2019). The required knowledge of phonological awareness initiates fundamental background of reading skills that positively affects the academic life of young students in their emergent stages (Author, 2020). Deep knowledge of phonological awareness levels is viewed as one of the vital factors in promoting young learners' early reading and spelling ability (Konza, 2014). This implies that the young students can realize sound constituents and recognize them in new words. Consequently, this will help them to generate new words when practicing phonological awareness instructions through its levels (Phillips, et al., 2008). To have a scrutinized look at the levels of phonological awareness based on their arrangement of intricacy (from less complex level to more complex one), Chard and Dickson (1999) offered an outstanding classification of phonological awareness competence. This classification highlights the differences between phonological and phonemic awareness skills. Interestingly, it can be divided into

three ranks. In the first rank, exercises such as initial rhymes, sentence segmentation, and rhyming songs are involved. It should be noted that this rank falls within the least complex level. The second rank deals with exercises pertaining to segmenting words into syllables, blending syllables into words, blending onsets and rimes into words, as well as segmenting words into onsets and rimes. At the final rank, which is regarded as the most difficult one of the levels of phonological awareness, phonemic awareness exercises are included. Such exercises involve the ability to manipulate, segment, blend, and change individual phonemes within words to generate new ones (Chard & Dickson, 1999). Given that young learners obtain full phonological awareness skills in addition to other literacy skills, they are able to read English texts fluently in their academic future (Milankov et al., 2021; Kanval et al., 2024).

Despite the extensive research on EFL young learners' phonological awareness skills (Author, 2017; Ibrahim, 2018, Owodally, 2015), there has been few studies tackling EFL adult students' development in phonological awareness literacy particularly within Arab universities settings (Ibrahim, 2018). In addition, there has been a lack of studies on the effective implementation of phonological awareness skills within EFL classrooms (Author, 2020). Another challenge is that EFL learners of Arabic speakers experience hardships in performing outstanding communication when producing understandable pronunciation during practicing English language (Rababah, 2005). This probably gives an explanation that the difference between EFL young and adult learners' phonological literacy could be due to the acquisition and characteristics of L1 and L2 (Ibrahim, 2018; Waheed et al., 2010).

In Saudi EFL contexts, Al-Roomy (2013) claimed that EFL Saudi students face difficulties when developing reading comprehension and proficiency. This indicates that they lack the required essential skills necessary for mastering reading skill; EFL learners experience problems in learning English pronunciation and spelling when reading English texts (Al-Qahtani, 2016; Raihan & Nezami, 2012; Rashid et al., 2023). This accentuates the need for fundamental skills such as phonological awareness activities to master their reading abilities. Significantly, there should be more and more focus and attention on literacy acquisition to achieve an acceptable rate of reading achievement necessary for young and adult learners. Hence, the aim of this paper is to investigate the perceptions of Saudi EFL undergraduate students on phonological awareness levels.

LITERATURE REVIEW

Impacts of Phonological Awareness on Learning to Read

There is evidence showing reciprocal impacts between learning to read and phonological awareness abilities. To date, recent studies strongly proved that phonological awareness is a prerequisite as well as a strong predictor for learning to read (Author, 2017; Bandini et al., 2017; Erskine et al., 2020; Milankov et al., 2021; Wang et al., 2021). For instance, Sprugevica and Høien (2003) affirmed that, following a considerable body of evidence that existed in literature, phonological awareness is regarded as one of the best predictors in which young learners gain reading accuracy and fluency fast. To understand the process of learning to read acquisition and in the process of translating verbal communication into print for the sake of learning to read, young and adult learners must tackle the inner components of words; this includes phonemes creating spoken words in speech (Kinkiri et al., 2020). How print is translated into speech sounds requires the ability of hearing these discrete phonemes (Chard & Dickson, 1999). For those who gain enough skills in phonological awareness, they are able to remember the association between the letter and sounds, having the knowledge of such relations leads to meaningfully decoding printed words in sentences (Schuele & Boudreau, 2008). As for those finding difficulties with decoding, they struggle with reading, causing misreading of large numbers of printed words when practicing reading English texts. If this problem continues,

this probably leads to incorrect use of letter-sound relations, affecting learners' performance in reading words in later stages and suffering from poor reading due to the lack of phonological awareness skills (Author, 2017). Robust findings based on previous studies revealed that young learners who cannot manipulate sounds in words experience hardships in the process of learning to read (Author, 2021; Anthony & Farnicis, 2005). This emphasizes a reciprocal relationship between phonological awareness and the progress of reading development. Thus, to have better readers of university undergraduate students, the knowledge of phonological awareness should be highlighted. For example, a study conducted by Cárnio et al. (2017) investigated early literacy skills and identified that phonological awareness has been regarded as one of the fundamental skills in learning to read and write. Moreover, among the strong arguments made by researchers concerning the relevant method appropriate for the instruction of reading of young learners, one essential component that is clearly noticeable in research as a crucial cornerstone of acquiring early literacy is phonological awareness (Author, 2017; Yopp & Stapleton, 2008). In another study, Kirby et al. (2003) highlighted phonological awareness role in relation to reading development. The researchers pointed out that phonological awareness is an essential ingredient which plays a remarkable role in the reading ability development. They added that poor phonological awareness probably leads to the deficiency in reading disability. Thus, their findings added to the growing body of knowledge that phonological awareness skill is fundamental in learning to read.

EFL Learners' Phonological Awareness

Literature affirmed the efficient use of phonological awareness instructions within EFL setting at elementary schools (Author, 2021; Eshiet, 2014; Huo & Wang, 2017; Yeung & Chan, 2013; Yeung, 2012). These studies adopted different methods tackling phonological awareness instructions on EFL learners' literacy. The findings revealed a noticeable impact of the skill of phonological awareness based on instructions on young students' skill, particularly phonemic awareness skill, and word recognition (Author, 2021, 2017), and word reading (Yeung & Chan, 2013). Nevertheless, some researchers found no significant impacts of phonological awareness instructions on students' performance (Eshiet, 2014, Yeung, 2012).

One may pose a question! Can those results be generalized in favor of the influence of phonological awareness on the development of literacy in EFL settings? Author (2017) conducted an empirical study investigating the instructions of phonological awareness skill, namely phonemic segmentation skill and its impact on Jordanian EFL beginning readers' word recognition. The results of the quasi experiment showed significant differences in favor of the experiment group receiving phonemic segmentation skill activities. Another research conducted by Huo and Wang (2017) revealed that the instructions of phonological awareness have an effective role in improving EFL young students' literacy. The researchers scrutinized 15 quasi-experimental and experimental research conducted in previous studies to check the impact of explicit instruction of phonological awareness on EFL young students. They found that instructions in phonological awareness with respect to reading development have been remarkably efficient among elementary school. In the same vein, Kodae and Laohawiriyanon (2011) examined the impact of phonological awareness instructions on the literacy of Thai young students. Interestingly, the researchers found that positive impacts exist. However, such results do not investigate whether the instructions of phonological awareness skills have potent effect on adult Arab learners.

As for Saudi settings, teaching English as a foreign language starts from the fourth grade (Khawaji, 2022). Presented as a foreign language, a heavy load to Arab EFL learners is probably noticeable due to learning English. Scholars concluded that Arab EFL learners probably face several kinds of difficulties when reading English texts at the word level (Fender, 2008). Additionally, Saudi students

have studied English language in their schools for about 9 years. When they attend the university level, some of them in the preparatory program, particularly in remote areas, lack fundamental EFL literacy skills required to master English language due to the lack of phonological awareness as well as the English alphabet knowledge (Ibrahim, 2018). This indicates that most EFL teachers probably ignored teaching English phonology, phonological awareness in particular, to young students in English language classes in Saudi Arabia. This may imply that the absence of teaching phonology as an independent course at the Saudi Electronic University forms another challenge to students majoring English Language and Translation. Therefore, students infrequently make use of essential reading skills when reading English texts (Al-Qahtani, 2016). This poses a number of questions about our young and adult students' reading achievement, development, and success.

In the context of Saudi universities tackling phonological awareness investigation, Ibrahim (2018) adopted a quasi-experimental study. In his study, the researcher made a comparison between strong disclosure to language versus obvious instructions of phonological awareness pertaining to reading fundamentals of adult Arab EFL learners. He found that phonological awareness instructions have significant impacts on the samples of EFL literacy. Finally, his study recommended that phonological awareness instructions should be strongly introduced to enhance the literacy of Arab students.

It is important to note that this paper adopted Ehri's (2005) Phase Theory as a theoretical framework. Provided that phonological awareness can be described as one of the critical columns that lead to the development of reading achievement and proficiency, this study thus focuses on the perspectives of Saudi EFL university students towards phonological awareness levels. It is interesting to indicate that Ehri's (2005) Phase Theory introduced four phases for the sake of reading development, namely the pre-alphabetic phase, the partial alphabetic phase, the full alphabetic phase, and the consolidated alphabetic phase. Beech (2005) contended that the task of this framework is to demonstrate learners' development in reading skill.

In a word, research dramatically presented phonological awareness as a crucial part of the reading process that is based on the integration of different skills. The link between young learners' reading and phonological awareness is remarkably evident in recent research. For example, a large number of studies tackling phonological skills in EFL learning contexts were conducted in elementary classes (Liang & Fryer, 2024). However, there is a dearth of studies addressing the effective use of phonological awareness skill on EFL adult students' literacy development, particularly within Arab universities settings (Ibrahim, 2018). Hence, the current paper tries to examine the perspectives of Saudi EFL undergraduate students on phonological awareness levels at Saudi Electronic University. Interestingly, this research is conducted to answer the following questions:

- 1- What perspectives do Saudi EFL undergraduate students think of phonological awareness skills?
- 2- What perspectives do Saudi EFL undergraduate students think of phonemic awareness skills?
- 3- Are there significant differences in Saudi EFL undergraduate students' responses between the items related to phonological awareness skills and phonemic awareness skills?
- 4- Are there significant differences in the perspectives of Saudi EFL undergraduate students on phonological awareness levels in terms of gender, academic level, and GPA?

METHOD

Research Design and Participants

This is a quantitative research study since this type of research methodology depends on statistical analysis using numeric data collection (Creswell, 2012; Jam et al., 2011). This paper used a cross-sectional questionnaire that involved items describing the perspectives of Saudi EFL undergraduate students on phonological awareness levels. It was presented to 160 Saudi EFL undergraduate students who enrolled in the program of English Language and Translation. To determine the sample size, these participants were selected in accordance with Krejcie and Morgan's (1970) table. It should be noted that the convenience sampling was chosen for its appropriateness. According to the participants' academic year level, 42.5% of them (n=68) were sophomores, 40.6% of them (n= 65) were seniors, and 16.9% of them (n=27) were juniors. As for gender, 68.8% of the participants were female (n=110) and 31.2% of them were male (n=50). With reference to their GPA, 26.3% of the participants (n=42) were under excellent category, 21.2% of them (n=34) were included in the category of 'very good', 40.6% of them (n=65) were under the category of 'good', and 11.9% of them (n=19) were within the category of 'pass'.

Materials and Procedures

For the sake of data collection, the respondents were asked to fill in a 5 Item-Likert scale questionnaire. It has three sections; the first one requests information relating to students' background information such as academic year level, GPA, and gender. With respect to learning to read, the second section involves items to measure EFL undergraduate students' awareness and beliefs of phonological awareness levels and the last includes items to gauge their awareness and beliefs of phonemic awareness skill. It took approximately ten to fifteen minutes for respondents to complete the whole online questionnaire survey. Specifically, this survey adopted from Author (2020) contains 14 questions; 9 of them highlight the role of phonological awareness and the rest of the questions accentuate the role of phonemic awareness regarding learning to read. It is interesting to note that Paired Sample t- test, Independent Sample Paired t-test, descriptive statistics, and one-way ANOVA were employed to analyze the data. SPSS software version 22 was therefore employed in order to analyze the data commencing during the first semester of the 2023/2024 academic year.

Consulting a panel of language specialists such as English instructors and university professors in the field, the validity of the research instrument was checked, and their suggestions and recommendations were meticulously considered. As for reliability confirmation, the entire items of the research tool submitted to Saudi EFL undergraduate students was calculated and the correlation coefficient recorded 0.94 which was regarded as high reliability for the whole study. It is important to note that the internal consistency reliability of the phonological awareness items (1-9) produced a coefficient of 0.90 when conducting the statistical analysis. In addition, the correlation coefficient was recorded as 0.86 when conducting the statistical analysis with respect to the items (10-14) of phonemic awareness skills. It is crucial to indicate that the research ethical consideration has been seriously given careful attention; the research procedure has been approved by Research Ethics Committee (SEUREC-4462) at Saudi Electronic University. In addition, a consent form attached with the online survey was provided to the participants.

RESULTS

A set of analyses were run to investigate (a) the perspectives of Saudi EFL undergraduate students' beliefs on phonological awareness skills, (b) the perspectives of their beliefs on phonemic awareness

skills, (c) any significant differences in Saudi EFL undergraduate students' responses between the items of phonological awareness and phonemic awareness skills, and (d) whether there are significant differences in the perspectives of Saudi EFL undergraduate students on phonological awareness levels in terms of gender, academic level, and GPA (Grade Point Average).

Table 1 Perceptions of Saudi EFL undergraduate students on phonological awareness

	Items	Mean	SD
1	Phonological awareness is a topic which I studied at the university.	3.28	1.02
2	Phonological awareness skill is essential in boosting reading skills.	3.93	0.98
3	Daily phonological awareness instructions are useful for predicting future reading difficulties.	3.90	0.96
4	Phonological awareness instructions can be used to prevent future reading difficulties.	3.94	0.89
5	phonological awareness levels include rhyme production, sentence segmentation, syllable splitting, and manipulation of phonemes levels.	3.85	0.90
8	Phonological awareness instructions do not help learners recognize the printed words.	2.90	1.19
9	Phonological awareness instructions focus only on the sounds in words.	3.20	1.06
10	When a learner recognizes and produces rhyming words, this is a part of phonological awareness.	3.54	1.01
14	Training in phonological awareness instructions help learners learn letter-sound associations	3.69	0.95

Perspectives of Saudi EFL Undergraduate Students on Phonological Awareness Skills

Table 1 describes the mean (M) and standard deviations (SD) pertaining to Saudi EFL undergraduate students' beliefs on phonological awareness skills. From the descriptive analysis, the results expressing EFL undergraduate students' perspectives did not record high mean scores (above 4.00 out of 5.00); the maximum mean score was 3.94 (out of 5.00). Specifically, respondents' mean scores were between 2.90 and 3.93. From the outset, item 1 (M= 3.28, SD= 1.02) showed that moderate numbers of respondents studied the topic of phonological awareness at their university. Concerning the perspectives of students' beliefs on phonological awareness skills, higher scores were relatively related to the essential part phonological awareness skills play in learning to read and in preventing reading difficulties in the future, representing by items 2 (M= 3.93, SD= .98), 3 (M= 3.90, SD= .96), and 4 (M= 3.94, SD= .89) respectively. Item 5 (M=3.85, SD=.90) explicitly expressed the levels of phonological awareness skills; most participants agreed that rhyme production, sentence segmentation, syllable splitting, and manipulation of phonemes levels are all located within the umbrella of phonological awareness levels. Furthermore, most respondents firmly believed that training in phonological awareness skills was fruitful in facilitating letter-sound associations as expressed by item 14 (M= 3.69, SD= .95). As for item 10 (M= 3.54, SD= 1.01), it highlighted participants' agreement in identifying one of the levels of phonological awareness, that is the recognition and production of rhyming words. In addition, a moderate number of respondents took into consideration that phonological awareness instructions are only interested in sounds rather than letters as described in item 9 (M= 3.20, SD= 1.06). It is crucial to note that respondents' confidence of the efficient function of phonological awareness instructions in learning to read process was considerably tangible; they showed disagreement on the belief that phonological awareness instructions do not help learners recognize the printed words as represented by item 8 (M=2.90, SD=1.19).

Perspectives of Saudi EFL Undergraduate Students on Phonemic Awareness

Like Table 1, Table 2 shows the descriptive analysis represented by mean (M) and standard deviations (SD) pertaining to Saudi EFL undergraduate students' beliefs on phonemic awareness skills highlighted by the second research question addressing items (6, 7, 11, 12, and 13). Once again, the results obtained from EFL undergraduate students' perspectives did not achieve high mean scores; the respondents' mean scores were between 3.29 and 3.74 out of 5.00. However, EFL undergraduate students' responses on mean scores were relatively close. Items 6 (M= 3.58, SD= .99) and item 7 (M= 3.63, SD= .99) accentuated respectively noticeable agreement concerning the definition of phonemic awareness skill and its instructions involving segmentation, deletion, blending, and other skills. Moreover, items 11 (M= 3.60, SD= .96) and 12 (M= 3.29, SD= .94) represented the identification of phonemic segmentation skill; the former showed that remarkable EFL students' beliefs agree with the definition of phonemic awareness and the latter, though presenting the lowest mean score, emphasized their moderate beliefs on which blending activity is an easy skill compared to phonemic segmentation activity. Given that item 13 (M= 3.74, SD= .87) recorded the highest mean score, this result remarkably indicated the participants' agreement on the belief that the phonemic awareness skills are considered to be one of the most sophisticated levels of phonological awareness.

Table 2 Perceptions of Saudi EFL undergraduate students on phonemic awareness

	Items	Mean	SD
6	Phonemic awareness can be defined as the ability to hear and manipulate the sounds in spoken words.	3.58	0.99
7	Phonemic awareness includes blending, counting, deletion, isolation, segmentation, substitution, and reversing order of sounds.	3.63	0.99
11	Phoneme segmentation involves segmenting sounds to pronounce words.	3.60	0.96
12	Phoneme blending skill is easier than phoneme segmentation skill	3.29	0.94
13	Phonemic awareness skills are considered to be one of the most sophisticated levels of phonological awareness.	3.74	0.87

Differences in Responses between Items of Phonological and Phonemic Awareness Skills

In order to examine the differences in Saudi EFL undergraduate students' responses between items associated with phonological and phonemic awareness skills, Table 3 demonstrated the paired sample t- test results. These findings indicated a significant difference exists between the items of Saudi EFL undergraduate students' responses in relation to phonological and phonemic awareness skills ($t=48.59$, $p<.05$). Interestingly, the mean score (M= 32.25, SD= 6.85) of the items related to phonological awareness skills was much better than the mean score (M= 17.86, SD= 3.87) of the other items connected with phonemic awareness skills. Thus, the significant difference has been in favor of the Saudi EFL undergraduate students' responses providing items associated with phonological awareness. This implies that Saudi EFL undergraduate students are more aware of phonological skills than phonemic awareness skills.

Table 3 Paired sample t-test results of Saudi EFL undergraduate students' responses between items of phonological and phonemic awareness skills

Items of Saudi EFL Undergraduate Students' Responses	N	Mean	SD	t	p
Items related to phonological awareness skills	160	32.25	6.85	48.59	.000
Items related to phonemic awareness skills	160	17.86	3.87		

Differences in Perspectives in Terms of Gender, Academic Level, and GPA

Finally, the fourth research question asked whether there are statistically significant differences between Saudi EFL undergraduate students' perspectives of phonological awareness levels in terms of gender, academic level, and GPA. A number of analyses were used to answer the last question; these involve independent sample t-test analysis for gender and one-way ANOVA for measuring Saudi EFL undergraduate students' academic level and their GPA to determine whether there were significant differences between these variables.

Using an independent sample t-test, Table 4 depicts the impact of gender on Saudi EFL undergraduate students' perspectives of phonological awareness levels. It is important to note that a significant difference between Saudi EFL male and female undergraduate students' perceptions has been revealed. Hence, gender has a considerable impact on Saudi EFL undergraduate students' perceptions; the significant p-value ($p=.011$) has been recorded when running the analysis. Thus, the perspectives of Saudi EFL undergraduate students' beliefs on phonological awareness levels are affected by female participants since the mean score ($M= 51.53$) records higher than male respondents' mean score.

Table 4 The impact of gender on Saudi EFL undergraduate students by employing independent sample T-Test

Items 1-14	Gender	N	Mean	SD	t	p
Perspectives of Saudi EFL undergraduate students' beliefs on phonological awareness levels	Male	50	47.00	10.18	-2.57	.011
	Female	110	51.53	10.35		

* $p < 0.05$

The analysis of One-way ANOVA was run to examine whether a significant difference existed among Saudi EFL undergraduate students' perspectives based on their academic level. The findings of the ANOVA analysis concerning the perspectives of Saudi EFL undergraduate students' beliefs on phonological awareness levels in terms of academic level are presented in Table 5. The findings revealed that there is no significant difference between Saudi EFL undergraduate students' perspectives and their academic level since the p-value is 0.57 and the mean scores for all academic levels are adjacent to each other. This also indicates that their academic levels do not affect their responses.

Table 5: ANOVA for Saudi EFL undergraduate students and their academic level

Items 1-14	Academic Level	N	Mean	SD	F	P
Perspectives of Saudi EFL undergraduate students' beliefs on phonological awareness levels	Sophomore	68	51.13	12.45	.56	.57
	Junior	27	49.48	6.26		
	Senior	65	49.30	9.62		
	Total	160	50.11	10.47		

* $p < 0.05$

To determine if a significant difference existed among Saudi EFL undergraduate students' perspectives based on their GPA, an analysis of One-way ANOVA was run in this research. Table 6 describes the results of the ANOVA analysis regarding the perspectives of Saudi EFL undergraduate students' beliefs on phonological awareness levels in relation to GPA. Like the case of academic level variable conducted to find any significant differences, it has been found that there is no significant difference among Saudi EFL undergraduate students' perspectives in terms of GPA. From table 6, the

p-value records 0.10 and the mean scores for all GPA categories are approximately close to each other. This means that Saudi EFL undergraduate students' GPA do not influence their responses.

Table 6 ANOVA for Saudi EFL undergraduate students and their GPA

Items 1-14	GPA	N	Mean	SD	F	P
Perspectives of Saudi EFL undergraduate students' beliefs on phonological awareness levels	Excellent	42	52.45	4.08	2.09	.10
	Very good	34	51.32	13.51		
	Good	65	47.69	10.90		
	Pass	19	51.05	11.67		
	Total	160	50.11	10.47		

*p < 0.05

DISCUSSION

In all societies, institutions taking care of education have globally tried their best to spread knowledge and enlightenment to their individuals. In addition to other essential factors, phonological awareness skills play a crucial role; a role that greatly helps learners learn to read is paramount. As a response of revealing the failure in reading skill EFL adult learners experience, this study examines the perspectives of Saudi EFL undergraduate students of phonological awareness levels. In general, what is found in this study is that the mean score of all respondents' perspectives was not high; this indicates that Saudi undergraduate students relatively lack the required skills in reading. This could be due to the absence of phonology; this course has not been introduced as a separate course at Saudi Electronic University.

The first research question examined the perspectives of Saudi EFL undergraduate students' beliefs on phonological awareness skills represented by items (2, 3, 4, 5, 8, 9,10, and 14). Specifically, most participants agreed with the pivotal function of phonological awareness skills in learning to read and in preventing future reading hardships as indicated by items (2, 3, and 4). This result is consistent with other studies (Author, 2020; Al Otaiba et al., 2008; Burke et al., 2009). For instance, Burke et al. (2009, p. 209) contend that "phonological awareness is the first essential element of a prevention-based approach to reading failure and disability". This clearly implies that once Saudi EFL undergraduate students realize such impactful uses, EFL adult learners will primarily have the chance to mitigate potential future reading hardships. With reference to item 5, noticeable responses from EFL undergraduate students highlight the levels of phonological awareness skills including rhyme production, sentence segmentation, syllable splitting, and manipulation of phonemes. In addition, item 10 emphasized that large numbers of respondents perceive that the recognition and production of rhyming words are included within the levels of phonological awareness. This means that most respondents agree that such skills are located within the umbrella of phonological awareness. This also indicates that they are considerably aware of the levels of phonological awareness as introduced by Chard and Dickson (1999). Furthermore, most of them highlighted a dramatical level of awareness regarding their distinction between sounds and letters of English language as mentioned by item 9. These results go in line with Author (2020) study; both authors revealed that "most of the participants reported a significant level of awareness concerning the main function of phonological awareness" (p. 826). It has also been found that when learners get adequate training in phonological awareness, this will easily lead to learning letter sound associations as indicated by item 14. This result goes in line with studies conducted by Cardoso-Martins et al. (2011), Kim et al. (2010), Foy and Mann (2006), and Evans et al. (2006). For example, Huang et al. (2014, p.190) argued that "Phonological awareness helps children to extract the letter sounds from the letter names that they know". It is not surprising that the low mean score confirmed the participants'

agreement on the belief that phonological awareness instructions do not help learners identify the printed words as expressed by item 8. Milankov et al. (2021) claimed that phonological awareness skills are strongly connected with developing early stages of reading and writing skills. This means that Saudi EFL undergraduate students were fairly aware of the significance of phonological awareness skill regarding the issue of reading acquisition. This result is consistent with other studies such as Author (2020) and Milankov et al. (2021). To highlight this point, in the findings of the study conducted by Milankov et al. (2021), the researchers found that “Students who had lower reading scores also obtained lower scores in the phonological awareness test” (p. 12).

The second research question investigated the perspectives of Saudi EFL undergraduate students’ beliefs on phonemic awareness skills represented by items (6, 7, 11, 12, and 13). From the beginning as represented by items 6 and 7, Saudi EFL undergraduate students share remarkable awareness toward the definition of phonemic awareness skill and its instructions. Such instructions encompass segmentation, deletion, blending, substitution, and other skills. In their research, Cheesman et al. (2009) identified multiple types of phonemic awareness instructions and activities helping young learners improve a knowledge of sounds in spoken words. The researchers mentioned some activities including matching phonemes, phoneme segmentation, phoneme blending, and phoneme deletion. This implies that teaching learners to manipulate phonemes provides noticeable effect and assistance to them in the issue of learning to read. With reference to items 11 and 12, considerable responses from Saudi EFL undergraduate students accentuate the function of phonemic segmentation skill; this skill includes segmenting distinct sounds to pronounce individual words. Cheesman et al. (2009, p.271) pointed out that “In phoneme segmentation activities, children break a spoken word into separate phonemes (i.e., “Tap out the sounds in drum. /d/ /r/ /u/ /m/)” as a crucial step to pronounce words. As for item 12, it should be noted that phoneme blending skill is easier than phoneme segmentation skill. This result goes in line with the empirical studies conducted by de Graaff et al. (2011) and Gesel et al. (2021). Interestingly, Yopp (1988) claimed that phoneme blending is considered as one of the easiest tasks of phonemic awareness skill for young learners to be carried out. Item 13 highlighted EFL undergraduate students’ agreement on the belief that the skill of phonemic awareness is regarded as one of the most sophisticated levels located within the umbrella of phonological awareness. Consistent with this finding, Schuele and Boudreau (2008) pointed out that phonemic awareness skills form a deep or complex level of phonological awareness. In addition, Milankov et al. (2021, p.2) asserted that “Phonological awareness is the ability to identify, process, and manipulate phonological units that compose spoken words of different complexity and size”. Also, acquiring and learning phonological awareness skills are easier than phonemic awareness skill acquisition since the latter represents the most advanced level located under the realm of phonological awareness (Chard & Dickson, 1999; Lynch, 2016). Hence, this type of complexity-represented by phonemic awareness skills- involves the knowledge that words in speech can be split into their distinct constituents (Milankov et al., 2021). All in all, Saudi EFL undergraduate students are fairly aware of the skill of phonemic awareness.

To address the third research question, the potential differences in Saudi EFL undergraduate students’ responses between items connected with phonological and phonemic awareness skills have been investigated. Therefore, the focus for this question has been on whether there will be a significant difference in their responses concerning the skills of phonological and phonemic awareness. It has been revealed that there is a significant difference (the p-value is less than .05) between the items of Saudi EFL undergraduate students’ responses in relation to both skills. This significance difference reflects Saudi EFL undergraduate students’ responses in favor of the items pertaining to phonological awareness skill. Thus, Saudi EFL undergraduate students are more knowledgeable of phonological awareness skills rather than phonemic awareness skills. This result goes in harmony with the findings revealed by studies conducted by Author (2020) and Alshaboul

(2018). In his study, it has been found that participants were knowledgeable of the significance of phonological awareness skills more than their knowledge of how to assess and teach other skills (Alshaboul, 2018). This clearly implies that Saudi EFL undergraduate students did not use the terms "phonological awareness" and "phonemic awareness" interchangeably or synonymously.

Regarding the fourth research question tackling differences in EFL undergraduate students' perspectives in terms of gender, academic level, and GPA, this specific question involves three variables. It has been revealed that Gender, the first variable, made a significant difference between Saudi EFL male and female undergraduate students' perceptions; the beliefs on phonological awareness levels were affected by female participants. This could be attributed to the total number of female participants represented by (68.8%) compared to the percentage of male participants (31.2%) in the English Language and Translation Department at SEU. This result supports other previous studies (e.g., Eslick et al., 2020; Moura, Mezzomo, & Cielo, 2009; Wilsenach & Makaure, 2018) in a manner that gender differences recorded in favor of female participants. Nevertheless, such finding does not go in harmony with research studies (e.g., Adam & Mohammed, 2017; Author, 2020; Ferraz et al., 2015; Kasai et al., 2002) that noted that male and female participants gained the same performance. For instance, in a study investigating preparatory year students' phonological awareness, Adam and Mohammed (2017) found that gender recorded insignificant influence regarding training of phonological awareness skills in terms of reading performance.

It should be noted that the second variable, academic level, did not record a significant difference among Saudi EFL undergraduate students' perspectives. This implies that most Saudi EFL undergraduate students' responses agreed with the whole perspectives of phonological awareness levels regardless to their academic levels having no effect on their responses. This result goes in line with other studies addressing students' academic level (e.g., Albashtawi et al., 2016; Almseidein & Mahasneh, 2020; Nguyen et al., 2021). Interestingly, according to Albashtawi et al. (2016), the researchers pointed out that "Decoding states the fluency in extracting the phonological and morphological information from a printed word" (p.63). Based on the variable of academic year level, Albashtawi et al. (2016) examined knowledge decoding; the researchers found no significant difference pertaining to that variable. However, this result is not consistent with several studies in that their findings showed significant differences with respect to students' academic level (e.g., Author et al, 2021; Bataineh & Baniabdelrahman, 2006; Mahfouz & Ihmeideh, 2009; Dakeev et al., 2015).

Finally, the third variable, GPA, did not also yield a significant difference among Saudi EFL undergraduate students' perspectives. This clearly indicates that this variable did not impact Saudi EFL undergraduate students' responses. Additionally, this probably imply that Saudi EFL undergraduate students approximately shared the same knowledge of phonological awareness levels regardless to their GPA. Consistent with this finding, research conducted by Alhadlaq et al. (2020) and Hendricks (2013) showed that GPA had insignificant differences; students' performance was not affected by their GPA. For instance, Alhadlaq et al. (2020) revealed that "There was no significant difference in the mean subjective norm scores across GPAs" (p. 79).

CONCLUSION AND FURTHER STUDIES

Robust instructions including both phonological and phonemic awareness skills can be viewed as one of the pivotal constituents of emerging reading development. The aim of this paper is to examine the perspectives of Saudi EFL undergraduate students' beliefs on phonological awareness levels. It is

important to note that this study addressed four research questions. The findings encompass the fundamental component phonological and phonemic awareness skills played in learning to read. This relatively gives a considerable and positive insight of most Saudi EFL undergraduate students' awareness of such skills located within the construction of phonological awareness levels as well as the fruitful functions and instructions of such skills though they did not record high mean scores. Another important result was that a significant difference exists between the items of Saudi EFL undergraduate students' responses in relation to phonological and phonemic awareness skills; such significant difference was in favor of items related to the skill of phonological awareness. Thus, Saudi EFL undergraduate students are more knowledgeable of phonological skills. As for investigating whether there are significant differences of the variables including gender, academic level, and GPA, the findings revealed that a significant difference between Saudi EFL male and female undergraduate students' perceptions in terms of gender was recorded. Significantly, the beliefs on phonological awareness levels were affected by female participants. The other two variables, namely academic level and GPA did not record significant differences among Saudi EFL undergraduate students' perspectives. Thus, both variables did not impact Saudi EFL undergraduate students' responses.

The findings of this research propose a pedagogical implication. Since there is a need to boost specific content awareness of Saudi EFL undergraduate students' phonological awareness levels, the phonology material should be studied as a separate course at SEU. Their knowledge might not be quite enough to help them increase their phonological and phonemical awareness skills as such skills have an effective role in reading achievement. This research was limited to the population representing university students majoring English language and Translation from which the sample was selected. Future research could involve conducting interviews that probably provide more in-depth investigation of Saudi EFL undergraduate students in addition to employing a quasi-experimental study comparing students' phonological and phonemical awareness skills.

ACKNOWLEDGMENT

The author extends his appreciation to the Deanship of Scientific Research at the author's affiliation for funding this research (8305-STS-2022-1-202301-1)

REFERENCES

- Adam, N. & Mohammed, M. (2017). The impact of raising phonological awareness on improving EFL learners reading comprehension: a case study at preparatory year Najran University. *International Journal of English Language Teaching*, 5(7), 1-46.
- Al Otaiba, S., Connor, C., Lane, H., Kosanovich, M., Schatschneider, C., Dyrland, A., ... & Wright, T. (2008). Reading First kindergarten classroom instruction and students' growth in phonological awareness and letter naming-decoding fluency. *Journal of School Psychology*, 46(3), 281-314. <https://doi.org/10.1016/j.jsp.2007.06.002>
- Albashtawi, A., Jaganathan, P., & Singh, M. (2016). Linguistic Knowledge Aspects in Academic Reading: Challenges and Deployed Strategies by English-Major Undergraduates at a Jordanian Institution of Higher Education. *Higher Education Studies*, 6(3), 61-71. <http://dx.doi.org/10.5539/hes.v6n3p61>
- Alhadlaq, A., Bin Dahmash, A., & Alshomer, F. (2020). Plagiarism perceptions and attitudes among medical students in Saudi Arabia. *Sultan Qaboos University Medical Journal [SQUMJ]*, 20(1), 77. <https://doi.org/10.18295/squmj.2020.20.01.011>
- Almseidein, T., & Mahasneh, O. (2020). Awareness of ethical issues when using an E-Learning system. *International Journal of Advanced Computer Science and Applications*, 11(1). <https://doi.org/10.14569/ijacsa.2020.0110116>

- Al-Qahtani, A. (2016). Why do Saudi EFL readers exhibit poor reading abilities. *English Language and Literature Studies*, 6(1), 1-15. <https://www.ccsenet.org/journal/index.php/ells/article/view/56175>
- Al-Roomy, M. (2013). *An action research study of collaborative strategic reading in English with Saudi medical students*. University of Sussex. PhD Thesis. <https://hdl.handle.net/10779/uos.23399363.v1>
- Alshaboul, Y. (2018). Jordanian Pre-Service EFL Teachers' Perspectives about Phonological Awareness: Contributions to Reading Development. *Athens Journal of Education*, 5(2), 173-188. <https://doi.org/10.30958/aje.5-2-5>
- Anthony, J., & Francis, D. (2005). Development of phonological awareness. *Current Directions in Psychological Science*, 14(5), 255-259. <https://doi.org/10.1111/j.0963-7214.2005.00376.x>
- Author (2017). *The effect of phonemic segmentation on word recognition through the use of interactive whiteboard among Jordanian English as a foreign language (EFL) beginning readers*. [Doctoral dissertation]. Universiti Utara Malaysia.
- Author (2020). Teachers' knowledge of phonological awareness levels: A case of Jordanian EFL teachers' perception. *International Journal of Innovation, Creativity and Change*, 13(11), 814 - 832.
- Author (2021). The Impact of Using the Interactive Whiteboard on Phonemic Awareness Instruction among EFL First Graders. *The Journal of Asia TEFL*, 18 (2), 576- 590.
- Author et al. (2021). The Effect of E-Learning Sessions on the Development of Reading Comprehension: A Case of EFL Students' Perceptions at Saudi Electronic University. *Journal of Education and e-Learning Research*, 8(4), 431-439.
- Bandini, H., Bandini, C., & Ranciaro, A. (2017). Relations between reading, vocabulary and phonological awareness in low-income children. *Paidéia (Ribeirão Preto)*, 27, 314-323. <https://doi.org/10.1590/1982-43272768201709>
- Bataineh, R., & Baniabdelrahman, A. (2006). Jordanian EFL students' perceptions of their computer literacy. *International Journal of Education and Development using ICT*, 2(2), 35-50. <http://ijedict.dec.uwi.edu/viewarticle.php?id=169&layout=html>
- Beech, J. (2005). Ehri's model of phases of learning to read: a brief critique.. *Journal of research in reading*, 28(1), 50-58. <https://doi.org/10.1111/j.1467-9817.2005.00252.x>
- Burke, M., Hagan-Burke, S., Kwok, O., & Parker, R. (2009). Predictive validity of early literacy indicators from the middle of kindergarten to second grade. *The Journal of Special Education*, 42(4), 209-226. <https://doi.org/10.1177/0022466907313347>
- Cardoso-Martins, C., Mesquita, T., & Ehri, L. (2011). Letter names and phonological awareness help children to learn letter-sound relations. *Journal of experimental child psychology*, 109(1), 25-38. <https://doi.org/10.1016/j.jecp.2010.12.006>
- Cárnio, M., Vosgrau, J., & Soares, A. (2017). The role of phonological awareness in reading comprehension. *Revista CEFAC*, 19(5), 590-600. <https://doi.org/10.1590/1982-0216201619518316>
- Chard, D., & Dickson, S. (1999). Phonological awareness: Instructional and assessment guidelines. *Intervention in School and Clinic*, 34(5), 261-270. https://gmfaororesources.weebly.com/uploads/2/4/0/4/24043085/1_chard_and_dickins_on_1999_phonological_awareness.pdf
- Cheesman, E., McGuire, J., Shankweiler, D., & Coyne, M. (2009). First-year teacher knowledge of phonemic awareness and its instruction. *Teacher Education and Special Education*, 32(3), 270-289. <https://doi.org/10.1177/0888406409339685>
- Creswell, J. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Boston, MA: Pearson.

- Dakeev, U., Mazumder, Q., Yildiz, F., Baltacı, K., & Mamadiev, B. (2015, June). *Motivation and learning strategies of students in Kyrgyzstan*. Paper presented at the 2015 ASEE Annual Conference & Exposition, Seattle, Washington. 10.18260/p.24509 <https://doi.org/10.18260/p.24509>
- de Graaff, S., Hasselman, F., Verhoeven, L., & Bosman, A. (2011). Phonemic awareness in Dutch kindergartners: Effects of task, phoneme position, and phoneme class. *Learning and Instruction, 21*(1), 163-173. <https://doi.org/10.1016/j.learninstruc.2010.02.001>
- Ehri, L. (2005). Learning to read words: Theory, findings, and issues. *Scientific Studies of Reading, 9*(2), 167-188. https://doi.org/10.1207/s1532799xssr0902_4
- Erskine, M., Munson, B., & Edwards, J. (2020). Relationship between early phonological processing and later phonological awareness: Evidence from nonword repetition. *Applied Psycholinguistics, 41*(2), 319-346. <https://doi.org/10.1017/S0142716419000547>
- Eshiet, O. (2014). *Synthetic phonics as a tool for improving the reading skills of Nigerian pupils* (Doctoral dissertation, Newcastle University). <https://theses.ncl.ac.uk/jspui/bitstream/10443/2480/1/Eshiet%20I.%202014.pdf>
- Eslick, C., Le Roux, M., Pottas, L., & Geertsema, S. (2020). Phonological awareness and speech perception: Skills of Grade 1 English second language learners. *Reading & Writing-Journal of the Reading Association of South Africa, 11*(1), 1-10. <https://files.eric.ed.gov/fulltext/EJ1260890.pdf>
- Evans, M., Bell, M., Shaw, D., Moretti, S., & Page, J. (2006). Letter names, letter sounds and phonological awareness: An examination of kindergarten children across letters and of letters across children. *Reading and Writing, 19*, 959-989. <http://dx.doi.org/10.1007/s11145-006-9026>
- Fender, M. (2008). Spelling knowledge and reading development: Insights from Arab ESL learners. *Reading in a Foreign Language, 20*(1), 19-42 <http://hdl.handle.net/10125/66623>
- Ferraz, I., Pocinho, M., Pereira, A., & Pimenta, A. (2015). Phonological Awareness Program: A longitudinal study from Preschool to 4th Grade. *SHS Web of Conferences, 16* (2015), 0100216. <https://doi.org/10.1051/shsconf/20151601002>
- Foy, J. & Mann, V. (2006). Changes in letter sound knowledge are associated with development of phonological awareness in pre-school children. *Journal of Research in Reading, 29*(2), 143-161. <https://doi.org/10.1111/j.1467-9817.2006.00279.x>
- Gesel, S., LeJeune, L., & Lemons, C. (2021). Teaching phonological awareness to preschoolers with Down syndrome: boosting reading readiness. *Young Exceptional Children, 24*(1), 39-51. <https://doi.org/10.1177/1096250619865953>
- Hendricks, K. (2013). *Reading and test taking in college English as a second language students* [Doctoral dissertation, Syracuse University]. https://surface.syr.edu/cgi/viewcontent.cgi?article=1181&context=psy_etd
- Hentasmaka, D., Cahyono, B., Basthomi, Y., & Puspitasari, Y. (2022). The Effect of Embedding Phonological Awareness Training on Adult EFL Learners' Phonological Awareness Skill. *European Journal of Educational Research, 11*(4), 2023-2030. <https://doi.org/10.12973/eu-er.11.4.2023>
- Huang, F., Tortorelli, L., & Invernizzi, M. (2014). An investigation of factors associated with letter-sound knowledge at kindergarten entry. *Early Childhood Research Quarterly, 29*(2), 182-192. <https://doi.org/10.1016/j.ecresq.2014.02.001>
- Huo, S., & Wang, S. (2017). The effectiveness of phonological-based instruction in English as a foreign language student at primary school level: A research synthesis. *Frontiers in Education, 2*(15), 1-13. <https://doi.org/10.3389/educ.2017.00015>
- Ibrahim, M. (2018). Explicit versus Implicit Modes of EFL Reading Literacy Instruction: Using Phonological Awareness with Adult Arab Learners. *Academia Journal of Educational Research 6*(4): 98-107. <https://doi.org/10.15413/ajer.2017.0129>

- Jam, F. A., Sheikh, R. A., Iqbal, H., Zaidi, B. H., Anis, Y., & Muzaffar, M. (2011). Combined effects of perception of politics and political skill on employee job outcomes. *African Journal of Business Management*, 5(23), 9896-9904.
- Kanval, N., Ihsan, H., Irum, S., & Ambreen, I. (2024). Human Capital Formation, Foreign Direct Investment Inflows, and Economic Growth: A Way Forward to Achieve Sustainable Development. *Journal of Management Practices, Humanities and Social Sciences*, 8(3), 48-61.
- Kasai, K., Nakagome, K., Iwanami, A., Fukuda, M., Itoh, K., Koshida, I., & Kato, N. (2002). No effect of gender on tonal and phonetic mismatch negativity in normal adults assessed by a high-resolution EEG recording. *Cognitive Brain Research*, 13(3), 305-312. [https://doi.org/10.1016/S0926-6410\(01\)00125-2](https://doi.org/10.1016/S0926-6410(01)00125-2)
- Khawaji, A. (2022). Transition of English Language Teaching in Saudi Arabia: A Critical Evaluative Study. *Arab World English Journal*, 13 (4) 265-280. <https://dx.doi.org/10.24093/awej/vol13no4.17>
- Kim, Y., Petscher, Y., Foorman, B., & Zhou, C. (2010). The contributions of phonological awareness and letter-name knowledge to letter-sound acquisition—a cross-classified multilevel model approach. *Journal of Educational Psychology*, 102(2), 313–326. <https://doi.org/10.1037/a0018449>
- Kinkiri, S., Barakat, B., Keates, S. (2020). Phonemes: An Explanatory Study Applied to Identify a Speaker. In: Bhattacharjee, A., Borgohain, S., Soni, B., Verma, G., Gao, XZ. (eds) *Machine Learning, Image Processing, Network Security and Data Sciences*. MIND 2020. Communications in Computer and Information Science, vol 1241. Springer, Singapore. https://doi.org/10.1007/978-981-15-6318-8_6
- Kirby, J., Parrila, R., & Pfeiffer, S. (2003). Naming speed and phonological awareness as predictors of reading development. *Journal of Educational Psychology*, 95(3), 453–464. <https://doi.org/10.1037/0022-0663.95.3.453>
- Kodae H, Laohawiriyanon C (2011, April). *Effects of intensive phonics instruction on reading and spelling attainment of Thai grade 5 learners with reading difficulties*. Paper presented at the 3rd International Conference on Humanities and Social Sciences, Prince of Songkla University, Sogkhla, Thailand. Teaching Techniques (pp. 1-17).
- Konza, D. (2014). Teaching reading: Why the “Fab Five” should be the “Big Six”. *Australian Journal of Teacher Education*, 39 (12), 153-169. <https://doi.org/10.14221/ajte.2014v39n12.10>
- Krejcie, R. & Morgan, D. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30 (3), 607-610. <https://doi.org/10.1177/001316447003000308>
- Liang, L., & Fryer, L. (2024). Phonological instruction in East Asian EFL learning: A scoping review. *System*, 123, 103336. <https://doi.org/10.1016/j.system.2024.103336>
- Lynch, S. (2016). The effect of supplemental, explicit phonemic awareness instruction on the reading achievement of kindergarten emerging readers and nonreaders. *Culminating Experience Action Research Projects* 18(1), 26–36. <https://files.eric.ed.gov/fulltext/ED573167.pdf>
- Mahfouz, S., & Ihmeideh, F. (2009). Attitudes of Jordanian university students towards using online chat discourse with native speakers of English for improving their language proficiency. *Computer Assisted Language Learning*, 22(3), 207-227. <https://doi.org/10.1080/09588220902920151>.
- Milankov, V., Golubović, S., Krstić, T., & Golubović, Š. (2021). Phonological awareness as the foundation of reading acquisition in students reading in transparent orthography. *International Journal of Environmental Research and Public Health*, 18(10), 5440. <https://doi.org/10.3390/ijerph18105440>
- Moura, S., Mezzomo, C., & Cielo, C. (2009). Phonemic awareness stimulation and its effects regarding the variable gender. *Pro-fono : revista de atualizacao cientifica*, 21(1), 51–56. <https://doi.org/10.1590/s0104-56872009000100009>

- Nguyen, T., Van Bui, H., Thi, N., Thi, T., & Chi, V. (2021). Pedagogy undergraduates' perception on twenty-first century skills. *JETT*, 12(4), 90-94. <https://doi.org/10.47750/jett.2021.12.04.013>.
- Owodally, A. (2015). Code-related aspects of emergent literacy: How prepared are preschoolers for the challenges of literacy in an EFL context?. *Early Child Development and Care*, 185(4), 509-527. <https://doi.org/10.1080/03004430.2014.936429>
- Phillips, B., Menchetti, J., & Lonigan, C. (2008). Successful phonological awareness instruction with preschool children: Lessons from the classroom. *Topics in early childhood special education*, 28(1), 3-17. <https://doi.org/10.1177/0271121407313813>
- Rababah, G. (2005). Communication problems facing Arab learners of English. *Journal of Language Learning* 3(1), 180-197. https://www.researchgate.net/publication/228380118_Communication_problems_facing_Arab_learners_of_English#fullTextFileContent
- Raihan, S. & Nezami, A. (2012). A critical study of comprehension strategies and general problems in reading skill faced by Arab EFL learners with special reference to Najran University in Saudi Arabia. *International Journal of Social Sciences & Education*, 2(3), 306-316. <https://ijsse.com/sites/default/files/issues/2012/Volume%202%20Issue%203,%202012/Paper-30/Paper-30.pdf>
- Rashid, A., Jehan, Z., & Kanval, N. (2023). External Shocks, Stock Market Volatility, and Macroeconomic Performance: An Empirical Evidence from Pakistan. *Journal of Economic Cooperation & Development*, 44(2), 1-26,
- Schuele, C., & Boudreau, D. (2008). Phonological awareness intervention: Beyond the basics. *Language, Speech, and Hearing Services in Schools*, 39(1), 3-20. [https://doi.org/10.1044/0161-1461\(2008/002\)](https://doi.org/10.1044/0161-1461(2008/002))
- Segawa, J., Masapollo, M., Tong, M., Smith, D., & Guenther, F. (2019). Chunking of phonological units in speech sequencing. *Brain and language*, 195, 104636. <https://doi.org/10.1016/j.bandl.2019.05.001>
- Sprugevica, I., & Høien, T. (2003). Early phonological skills as a predictor of reading acquisition: A follow-up study from kindergarten to the middle of grade 2. *Scandinavian Journal of Psychology*, 44(2), 119-124. <https://doi.org/10.1111/1467-9450.00329>
- Waheed, M., & Jam, F. A. (2010). Teacher's intention to accept online education: Extended TAM model. *Interdisciplinary Journal of Contemporary Research in Business*, 2(5), 330-344.
- Wang, J., Pines, J., Joannis, M., & Booth, J. (2021). Reciprocal relations between reading skill and the neural basis of phonological awareness in 7- to 9-year-old children. *NeuroImage*, 236, 118083. <https://doi.org/10.1016/j.neuroimage.2021.118083>
- Wilsenach, C., & Makaure, P. (2018). Gender effects on phonological processing and reading development in Northern Sotho children learning to read in English: A case study of Grade 3 learners. *South African Journal of Childhood Education*, 8(1), 1-12. <https://doi.org/10.4102/sajce.v8i1.546>
- Yeung, S. (2012). *Phonological awareness, oral language proficiency and beginning reading development among Hong Kong Chinese kindergarteners: An intervention study*. [Doctoral dissertation, The University of Hong Kong]. http://dx.doi.org/10.5353/th_b4812857
- Yeung, S., & Chan, C. (2013). Phonological awareness and oral language proficiency in learning to read English among Chinese kindergarten children in Hong Kong. *British Journal of Educational Psychology*, 83, (4), 550-568. <https://doi.org/gf52mj>
- Yopp, H. & Stapleton, L. (2008). Conciencia Fonemica en Espanol (Phonemic awareness in Spanish). *The Reading Teacher*, 61(5), 374-82. <https://doi.org/10.1598/RT.61.5.2>
- Yopp, H. (1988). The validity and reliability of phonemic awareness tests. *Reading Research Quarterly*, 23(2), 159-177. <https://doi.org/10.2307/747800>