

Spelling Strategies of Omani EFL Students

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Abstract

The aim of this study was to investigate the spelling strategies used by EFL students in Oman. In particular, the study focused on finding out the frequency of use of the strategies used by grade four and ten students, and the differences between both grades in the use of these strategies. The study also looked at the effect of both gender and student proficiency level on the type of spelling strategies used such as sounding out, syllabication, visual checking and others. The study sample consisted of 757 students from grades four and ten as they represent the exit level of cycle one and cycle two in Oman. The study utilized a questionnaire, which was divided into different categories representing different spelling strategies. Results revealed statistically significant differences in the use of the strategies with respect to gender and achievement levels. Based on the findings, practical implications and recommendations were provided.

Objective: The study aimed at identifying the frequency of spelling learning strategies that grades four and ten learners use to learn English spelling. Also, it explored the difference in the use of spelling strategies according to gender differences and achievement levels.

Methods: The study was of a survey design type in which a questionnaire of spelling learning strategies was used to collect the data. The instrument was valid and reliable according to the reliability measures and validity procedures used. The population comprised of students from both grades four and ten. The sample of the study included 757 male and female students from both grades.

Results: The strategies used by both grade four and ten differ in the frequency of use. It was found that grade four reported the use of rule use strategies more frequently and grade ten learners reported the use of visual checking strategies. There are statistically significant differences between male and female Omani EFL students in the used spelling learning strategies. Nevertheless, achievement level differences were found only between good students and low-level achievers.

Conclusions: Students reported the use of different spelling learning strategies as found per grade levels. There should be more attention given to the strategies introduced to students and curriculum designers should take into their considerations students' level and differences to design textbooks that would help all grades levels in learning to spell.

Keywords: Developmental Theories, EFL students, Oman, Overlapping Waves Theory, Spelling strategies

1. Introduction

1.1 Background of the Study

Spelling is a complex language skill that is important at all levels of education. It has been seen as a process involving visual and auditory processing that should be taught systematically and explicitly (Turbill, 2000). Learning to spell, according to O'Sullivan and Thomas, is "closely related to [children's] understandings of how spoken language is written down, and thus to their learning to read" (2007, p. 14). Studies on spelling strategies shed light on the difference between the strategies used by young children and those of older children and adults (Lewis, 1980; Holmes & Malone, 2004). According to Rittle-Johnson and Siegler (1999), children vary in their usage of spelling strategies across different levels and that variability could also be present within individual children's spelling. A study by Grabner-Hagen (2004) was conducted to explore different types of spelling learning strategies that children

use across different levels of education. In the study, teachers were asked to rate students into proficiency levels of poor, average, good and learning difficulty students. The children were interviewed to talk about what strategies they used in spelling words. Strategies were coded into the following: retrieval, sounding out, syllabification, visual checking, rule use, analogy, visual memory, mnemonic strategy and writing synonyms.

1.2 Statement of the Problem

There is a need to study students' spelling strategies in cycle one and cycle two schools in Oman. Grades four and ten in the Omani educational system represent the exit levels of cycle one and cycle two basic schools which give them the role of facilitating the transition process between each cycle and preparing students for the next one. According to grade four teachers' guide 4B, students are expected at this level to spell words correctly and be able to write sentences, dialogues, e-mails and instructions (Ministry of Education, 2012). Many students get low scores in tests, which might be attributed to the type of spelling learning strategies they use or they have been trained to use.

The higher the grade level the higher the expectation that the students will perform well in spelling. However, older learners in cycle two schools face the same problems in spelling. For instance, grade ten learners are expected to write more advanced and well organized paragraphs. According to the grade 10 teachers' guidebook 10 B from the Ministry of Education, "students are asked to analyze these texts [stories, letters, notes and e-mails] as a way of helping them to develop their writing skills" (2010, p. x). Unfortunately, many teachers in cycle two schools complain about the quality of students' writing and more specifically about spelling.

Given the context as described above, there is a serious need to explore spelling learning strategies used by grade four and ten students. It is very important to see how strategies differ across levels in cycle one and cycle two. Few studies have tackled spelling learning strategies and to our knowledge no studies have investigated this in the Omani EFL context.

1.3 Research Questions

The research questions can be put as follows:

1. What are the most frequently used spelling learning strategies by grade four and grade ten students?
2. Is there a statistically significant difference between grade four and grade ten male and female students in their use of spelling learning strategies?
3. To what extent does the achievement level affect grade four and grade ten students' usage of spelling learning strategies?

1.4 Aims and Objectives

The main aim of this study is to identify the common spelling learning strategies that grade four and grade ten learners use to learn English spelling. Additionally, it intends to explore the difference in the use of spelling strategies according to students' gender and achievement levels.

2. Literature Review

2.1 Spelling Developmental Theories

Three different theories in spelling development (also called stage model theories) have enriched our knowledge about spelling. Grabner-Hagen (2004) explains the differences between the three theories of spelling development. The first theory, the dual-route, has been based on the studies of spelling difficulties in adults who had brain injuries and those learners who had learning difficulty or who suffered from dyslexia. It assumes two spelling processes, one that depends on sound-letter correspondences and another that works at the word level (Kohnen, Nickels & Castles, 2009). Regarding the linguistic components, this theory also assumes that phonological and orthographic modules are connected to lexical processing (Grabner-Hagen, 2004). When children memorize the words, they use their visual skills to recall the spelling of words when writing. The dual-route theory emphasizes the use of two routes such as the phonological and the orthographic to store information and recall words for spelling (Sawyer & Joyce, 2005). According to Grabner-Hagen (2004), the dual route theory depends on the size of words an individual gets exposed to within different stages.

The second theory is the connectionist, which emphasizes the connection between letters and phonemes and considers the interaction between the lexical and phonological systems (Sawyer & Joyce, 2005). The last theory is called the amalgamation theory. This theory, however, is based on naturalistic observations and assumes the combination of different units of linguistic components to form the lexical unit. Unlike the previous theories

(dual-route and connectionist), the amalgamation theory has not been a result of human disability or brain injuries-based studies (Grabner-Hagen, 2004).

2.2 The Overlapping Waves Theory and Developmental Spelling Theories

Grabner-Hagen (2004) compared the three theories: amalgamation, dual-route and connectionist from the three perspectives: variability, adaptive choice and change. Regarding the stage models, they emphasized the use of one strategy at a time and stated that there are no options for choice. Change in the stage models is seen as a step to move to the upper level, which means that children exclusively use the available strategies, or have a characterization that is related to only a certain stage. Once they master that strategy, they move to the next level. Otherwise, the child is considered as a weak or poor learner if the mastery of that skill is not obtained. In comparison, the overlapping waves theory emphasizes the use of multiple strategies in spelling a word at a time. Then, the choice in strategy use depends on task demands. If the task requires deeper cognitive processes to learn a word, the child will use the strategy that is more suitable for that task to be accomplished. Finally, gradual change is observed over time, which means that the change in strategy use is observable as the child ages. This does not mean that children stop using one strategy because of the development of another. The gradual change occurs when a child reduces the heavy load of using a particular learned strategy by using a more advanced one or the most efficient one available, without demolishing the others (Grabner-Hagen, 2004).

2.3 Spelling Strategies

Many advocates of spelling strategies fail to specify whether the spelling strategies used by learners are part of language learning strategies or part of language use strategies. It seems that spelling learning and use strategies are combined to learn the spelling of a word. To further explain, spelling strategies involve the process of repeating contact with the material to be learned. This process is part of the learning strategy. The retrieval strategies used by learners are part of their use strategies. Thus, both are used in the process of learning the spelling of words.

Reason and Boote (1994) call for the development of spelling strategies that focus more on learning spelling explicitly and on teaching strategies to learners rather than leaving spelling to be caught incidentally. Learners need to acquire a repertoire of spelling strategies that help imprint new words into their long-term memory bank.

According to the literature on spelling strategies, the first very common strategy is sounding out, and it involves using phonetic clues or sounds to spell a word. The next is analogy and it includes the use of other words to work as clues to help in spelling. Rule use refers to the use of particular rules to spell a word. Syllabification presents the process of dividing words into syllables and spelling the parts of the words. Visual memory, as one of the least common strategies involves the use of a mental image of the word to spell it. Visual checking involves writing the word, looking at it and correcting it. The last is writing synonyms and it involves the ability to write the synonym of the word and then change it accordingly to produce correct spelling (Baleghizadeh & Dargahi, 2011; Grabner-Hagen, 2004).

The use of different methods to investigate spelling learning strategies remains a question for many researchers and different methods can provide a wealth of information about the strategies that children use in learning spelling. Researchers who carried out studies in spelling learning strategies have analyzed students' responses in verbal reports and also used observations. Thus, coded observations were used to analyze the type of strategies that children used in learning spelling. For example, when a child indicated that she or he broke the word into pieces, this meant that the child used syllabification. If the child indicated pronouncing the word to spell it, this meant that the child used sounding out. In this way, the researchers reported the type of strategy used by the learners.

Siegler (1996) asserted that individual differences were found across tasks and over time using cluster analysis. The clustering program separated students into three different groups and labeled them as "good students", the "not-so-good students" and the "perfectionists". The differences between the groups were evident in all of the dimensions used in identifying retrieval or back up strategies.

In the Omani EFL context, a few studies have generally been conducted in the area of language learning strategies, vocabulary learning strategies and spelling in general, but to the best of the researchers' knowledge, no study has been conducted to investigate spelling learning strategies.

2.4 Studies Related to Spelling Strategies

At spelling level, studies conducted in the Omani context were related to a specific type of strategy usage, for instance, using spelling e-games. Al Farsi (2009) investigated the effectiveness of using spelling e-games on fifth grade female learners' spelling performance and their attitudes toward using e-games in learning English spelling.

Two classes, one experimental and one control group, took part in this study. The experimental group used spelling e-games to learn the spelling of words. The other group used only the traditional strategy in the classroom, “the look, cover, write and check approach”. The findings of the study revealed that the experimental group was significantly ahead of the control group in their spelling performance. The researcher indicated that using games as a way to learn spelling will provide a new method for students to learn. The findings of the study also revealed that the attractive audio/visual features of the spelling games enhanced students’ attitudes toward learning spelling.

There are other strategies that have also been effective in spelling learning, such as the use of syllabification, spelling rules, body activities, dictionaries and technology. In a study by Bhattacharya and Ehri (2004), the effectiveness of syllable training on children’s ability to read and spell words was investigated. The researchers found that syllable training helped students to connect spelling to pronunciation in memory. The researchers also adapted analogy as a strategy to help students remember spelling of words along with the syllable training. The results revealed that syllable training helps struggling readers read and spell words.

Regarding the use of rules in spelling, Dos Santos (1989) investigated two different strategies in spelling. The first was visualization and the second was rule learning. The researcher divided the students into three groups. One group used the visual learning strategy, another group used the rule learning strategy, and the last group acted as the control group. The students were given a list of index cards that included words for spelling. Pre-tests and post-tests were performed along with retention tests a week later. The study revealed that the rule learning group made fewer errors in spelling compared to the control group. Another finding revealed that the rule learning group also used a visual strategy to learn the given words for spelling. This means that students did not only depend on one strategy to learn spellings of words but used other strategies along with the one introduced to them.

Getting students to use their body energy in learning to spell enhances their knowledge and encourages them to make connections between their memory and physical activities. Grant (1985) claims that the kinesthetic approach motivates students to learn and retain words in spelling. In his practical training, children used hand motion for letters and wrote the words on chalkboards. They liked the freedom of movement allowed in kinesthetic exercises because it attracted students’ attention. The results were positive in raising students’ enthusiasm as well as in making them remember words for spelling.

Huang (2003) investigated Taiwanese EFL students’ dictionary beliefs and the strategies they used in learning English. As reported by respondents on belief surveys, learning a word and having the ability to commit it into the memory are strongly related to dictionary use. Results revealed that the higher the proficiency level of the respondents, the stronger their interest in using dictionaries. A percentage of 56 indicated that good dictionary users were also good English learners. Another 86% reported their belief that English- English dictionaries helped in understanding English words better. Thus the use of dictionaries is considered an important strategy for learning spelling.

In more recent years, the availability of mobile phones has played a critical role in improving students’ spelling ability. Bushnell, Kemp and Martin (2011) carried out a cross-sectional study on 10 to 12 year children’s text-messaging using mobile phones and the relation of this to their spelling ability. The researchers chose 227 children to complete a questionnaire that revealed that 84% of the respondents used their phone or a family member’s phone to text-message their friends. The study revealed that there is a positive association between text-messaging and spelling. The researchers suggested that the reason behind this positive relationship is the fun of text-messaging one’s friends. Also, the freedom of spelling allowed in text-messages has increased children’s overall enjoyment of writing.

Kwong and Varnhagen (2005) conducted a microgenetic study (microgenetic methods involve direct observation over a period of time to detect changes in the learning process) on the spelling learning strategies based on the generalizations made by Rittle-Johnson and Siegler’s study (1999). They investigated children’s progression from the time they began to spell new words to the point at which they could retrieve the spelling from their memory in the light of the overlapping waves theory. Two different experiments were carried out in two different contexts. The first experiment involved 11 grade one children who were tested on new words over 4 to 7 weeks. Children were exposed to the new words and given spelling tests to retrieve and remember 80 % of the words. If children were not able to identify the strategy they used to remember words, probing was used. This means that children were asked how they got the correct spelling of words and responses were scored as phonological, analogy, retrieval and others once the child reported the strategy. Results from experiment one revealed that the most commonly reported type of strategy was phonological (sounding out strategy) and the least commonly reported strategy was analogy. The

findings show that children did not report combinations of strategies. Interestingly, children gradually made progress in shifting from backup strategies to retrieval, once they became more acquainted to the words.

In the second experiment, the aim of the study was to investigate whether adults follow the same spelling processes as children. Thirty four university students were tested on new words on a regular basis. The same procedures in experiment one were applied to experiment two. Responses were also scored according to participants' reported strategy use. For instance, if the participant reported verbally "I just spelled it the way it sounded", the response was scored as phonological. Other reported responses were also scored as analogy, morphological, visual checking, retrieval and combinations. The findings of the second experiment were very similar to the first; both children and adults showed shifts in strategy use. Adults varied in their reported strategy type usage by selecting a range of strategies to spell new words. Again, the most commonly used strategy reported by adults was phonology.

More studies show female superiority over male students in language learning. For example, Aslan (2009) investigated language learning strategies used by students learning English as a Foreign Language in terms of frequency of strategy usage and its relation to gender. The participants were 257 students (153 male and 104 female). They responded to a Strategy Inventory for Language Learning by Cesur and Fur (2007). The study revealed that female students were more successful and used more language learning strategies than male students.

Similar findings were also found by Wu (2014), who asked 700 students to respond to a questionnaire investigating their frequency of use of language learning strategies. Also, in this study the gender differences were investigated. It was found that female students were superior to male students in terms of using more language learning strategies in the EFL context.

Students in different places of the world differ in the types of strategies they use and others tend to use their first language in EFL classes for different purposes such as task management, pair work and private speech (Storch, Neomy & Aldosary, 2010). For instance, Takanashi (1999) investigated learning strategies differences between Japanese and British students in relation to their cultural beliefs. The study revealed differences in their preferences and styles of learning and in their strategy use. Therefore, culture might play an important role in the use of strategies in different places in the world. However, in another study by Dich, Nadya and Pedersen (2013) the influence of the first language on spelling among students from different backgrounds (Danish, Russian and Italians) was not found to be a big factor. The study focused on the influence of first language orthography on the amount of hesitation with spelling. The results were not similar to the hypothesis of the study and found that the amount of hesitation between all groups was equal. Thus, the influence of the first language perhaps affects some language speakers in their learning and not others.

Saudi EFL students (701) were involved in a study by Al Haisoni (2012). The researcher investigated the frequency and type of their language learning strategies with respect to gender and proficiency level. The results revealed that EFL students were low to medium strategy users. Al Haisoni's results were again similar to those of Wu's (2014) and Aslan's (2009) studies. Female students reported the use of more strategies than male students. Other findings revealed that highly proficient students reported the use of more strategies than low proficiency students.

In another study, Taguchi (2002) identified other learner factors such as gender, level of proficiency and motivation that affect the reported choice of language learning strategies among 46 Japanese learners. Results revealed that there was a statistically significant gender difference in overall strategy use in Japan. The study findings also supported other studies' findings, particularly female superiority over males in their reported strategy usage.

This superiority of females over males does not seem, however, to be conclusive. Asadifard and Biria (2013) found different results in their study, which investigated language learning strategy use and students' global self-esteem. 127 Iranian students completed two questionnaires about their strategy use and global self-esteem. The results showed that gender does not play a role in either strategy use or global self-esteem level.

Other studies investigated language learning strategies in specific language areas. For example, Al-Harrasi (2002) investigated vocabulary learning strategies by Omani female students. This study revealed that the students were moderate- strategy users in vocabulary learning strategies. The findings more often revealed significant differences in the use of certain strategies than other strategies among different grade levels. The preparatory students reported the use of cognitive, social and memory strategies more than the secondary students did. The participants in this study indicated high-use of TV programs, bilingual dictionaries and learning spelling by writing it repeatedly as vocabulary learning strategies.

3. Method

3.1 Population and Sample

This study is a survey research type in which a written questionnaire is distributed to groups of individuals. The population of the study was all grade four and ten male and female learners for the academic year 2013/2014 in Muscat governorate in Oman. The total number of the population was 14,921 students. Five percent of this number comprised the sample of the study.

Table 1. Distribution of Male and Female Students in Cycle One and Cycle Two

	School cycle		
	One	Two	
Male	180	173	353
Female	173	231	404
	353	404	
Total			757

Table 1 shows the distribution of male and female students in the two cycles, grades four and ten. The number of students in cycle one (grade four) is 353 and the number of students of Cycle two (grade ten) is 404. The number of the participants was dependent on students available in the classes that were selected randomly to respond to the questionnaire.

3.2 Research Instrument

The researchers used a questionnaire as an instrument to collect the data. It was developed to elicit students' spelling learning strategies. In order to develop the research instrument, the researchers reviewed the related literature and developed a questionnaire based on coded observations from Rittle-Johnson and Seigler's spelling strategies model (1999). In this model, the researchers investigated strategies such as retrieval, sounding out, analogy, rule use, syllabification, visual memory, visual checking, and writing synonyms. Other types of strategies identified in the literature were also included in the questionnaire. Such strategies involve using different types of dictionaries, kinesthetic strategies, creating word lists and writing the pronunciation of words in Arabic. In the classrooms, students tend to use different types of dictionaries such as English-Arabic or English-English to learn the elements that help learners in the process of learning spelling. Such elements include word meaning, visual image, pronunciation and word translation to first language. Regarding the word lists, children are encouraged to create their own word lists in the classroom. Therefore, the researchers included this element as a strategy that children use to learn spelling.

3.3 Questionnaire Format and Description

The questionnaire used a three- point scale and it was of the closed type requiring one response for each item. The participants were asked to respond to 25 items according to how often they used certain strategies in learning spelling. They had to choose one of the following: always =1, sometimes= 2, or never=3. The questionnaire was divided into three sections. The first section included personal background and demographic information about the respondents and the second part included the main categories and statements of the questionnaire. This part was divided into ten main categories.

The last part of the questionnaire was an open-ended question that asked respondents to add any additional strategies they use which were not mentioned in the questionnaire. Since one of the factors investigated in the present study was the effect of achievement level on the type of spelling strategy used, this part considered the last grade in English. Therefore, the last item was English grade of semester one (A, B, C, D, E). This, however, was made optional. The researchers used the previous marks from teachers' assessment portfolio in case students did not mention or acknowledge the latest mark or grade in the questionnaire.

The questionnaire was checked for relevance, clarity of items and accuracy of translation by a panel of university professors from the Language Center, College of Education, College of Arts and Social Sciences, and inspectors from the Ministry of Education. Therefore, the instrument was considered as valid based on their evaluation and revision.

Following the establishments of validity, reliability was determined through piloting the instrument using the test-retest method. The Pearson Correlation Coefficient, the measure of reliability between total scores in the two administrations (test-retest method), was found to be 0.71 and was considered an adequate level of reliability.

3.4 Procedures

The researchers arranged the dates and time of administration with senior teachers from several schools. The researchers selected the classes and distributed the questionnaires to students on the assigned dates. Then, the researchers asked senior teachers for the lists of names and their Semester One marks in order to divide students into groups based on their achievement levels. According to students' achievement levels, the groups fall into the following categories (group A=good, group B=average, group C= poor). After data collection, the researchers used SPSS software package to analyze the data for descriptive reports, T-test for the question investigating gender differences and ANOVA for the question investigating the effect of students' achievement levels.

4. Results and Discussion

4.1 Frequency of Strategy Use

The study consisted of participants from both grades four and ten. To answer research question 1, the researchers measured the frequency of strategy use for both grades 4 and 10. The results revealed obvious differences between both grades. **Table 2** represents the means and standard deviations of the strategies used by both grades.

Table 2. Means and Standard Deviations of the Strategies Used by Grade Four and Ten

Grade	Strategy	Mean	Std. Deviation
Four	Rule use	1.59	.72
Ten	Visual checking	1.57	.45

As seen in **Table 2**, the most frequently used strategy by grade four is rule use with the mean score of 1.59 and the most frequently used strategy by grade ten is visual checking strategy with the mean score of 1.57.

Since rule use is introduced to grade four textbooks, students tend to utilize the rule use strategy more often than any other strategies. Grade four students used rule use because most of the textbook words were based on rules such as word endings (-ed, -ing or -ly). On the other hand, grade ten students indicated the use of visual checking strategy more often maybe because this is the only strategy that has been introduced in the textbooks and students are encouraged to use it most of the time.

4.2 A Comparison of Spelling Strategies Used by Students with Respect to Gender

This section answers the research question (i.e. Is there a statistically significant difference between grades four and ten male and female students in their use of spelling learning strategies?). The data of this question was analyzed statistically using the independent sample t-test.

Table 3. Means, Standard Deviations and the t-values of Strategies Used by Male and Female Students

Strategy	Gender	N	Mean	Std. Deviation	T	df	p-value
Syllabification	Male	353	2.13	.57	4.23	755	<.001
	Female	404	1.95	.61			
Visual memory	Male	353	2.20	.43	2.99	755	.003
	Female	404	2.30	.43			
Visual checking	Male	353	1.70	.49	2.79	755	.005
	Female	404	1.59	.49			

* Std = Standard Deviation, t = t values and df = degrees of freedom. The results shown in **Table 3** reveal significant gender differences at the 0.05 level in the three following strategies: syllabification, visual memory and visual checking. The differences in syllabification and visual checking are in favor of females whose mean scores in syllabification and visual checking are 1.95 and 1.59 respectively, while the means for male students in both strategies are 2.13 and 1.70 respectively. The difference in the mean scores for both groups in the two strategies reveal significant differences with a t-value of 4.24 and a p-value less than 0.001 for syllabification; and a t-value of 2.79 and a p-value of 0.005 for the visual checking strategy. This means that female learners reported the use of syllabification and visual checking more often than male students did. By contrast, the mean score for male students in visual memory is 2.20 and for females it is

2.30, and the results in the means of visual memory strategies of a t-value of 2.99 and a significance level of 0.003 ($p < .05$) reveal a statistically significant difference between male and female learners in favor of the male students. This means that the male students stated the use of visual memory strategies more than the female learners did.

A closer look at the mean scores shows slight differences in favor of the female students across the other strategies as well. This means that the female students use spelling learning strategies more often than the male students. This result was not surprising since generally, according to the results found in the studies by Taguchi (2002), Wu (2014), Aslan (2009) and Al Haisoni (2012), female learners use more language learning strategies than male students do. One possible reason why female learners tend to use more strategies is perhaps because they are keener to create more opportunities to use English and interact with people than male students do (Taguchi, 2002). In the Omani EFL context, most girls show more positive attitude to learn English language in general and they tend to use more strategies in learning than boys.

4.3 Effect of Level of Achievement on Strategies Used by Students

This section answers research question three, “To what extent does the achievement level affect grades four and ten learners’ use of spelling learning strategies?” ANOVA followed by a scheffe test were used. Scheffe was used for significant comparisons only.

Table 4. Means and Standard Deviations of the Strategies for Each Group of Achievement Levels

Strategy	Level	N	Mean	Std. Deviation
Retrieval	good A	159	1.81	.52
	average B	244	1.82	.44
	poor C	354	1.79	.46
	Total	757	1.80	.47
Sounding out	good A	159	1.78	.48
	average B	244	1.83	.46
	poor C	354	1.91	.48
	Total	757	1.85	.47
Analogy	good A	159	2.05	.84
	average B	244	2.06	.77
	poor C	354	2.17	.74
	Total	757	2.11	.77
Rule use	good A	159	1.67	.80
	average B	244	1.74	.77
	poor C	354	1.99	.73
	Total	757	1.84	.77
Syllabification	good A	159	1.99	.62
	average B	244	2.05	.61
	poor C	354	2.04	.58
	Total	757	2.03	.60
Visual memory	good A	159	2.33	.48
	average B	244	2.25	.42
	poor C	354	2.22	.42
	Total	757	2.25	.43
Visual checking	good A	159	1.63	.53
	average B	244	1.61	.47
	poor C	354	1.67	.49
	Total	757	1.64	.49
Writing synonym	good A	159	2.25	.70
	average B	244	2.13	.73
	poor C	354	2.23	.72
	Total	757	2.20	.72
Kinesthetic	good A	159	2.49	.42
	average B	244	2.46	.40
	poor C	354	2.40	.46
	Total	757	2.44	.43

* lower means represent higher strategy usage

**Std. = Standard Deviation

Table 4 shows a comparison between the levels of achievement: good, average, and poor and the type of strategies that each group reported to use. The table clearly shows that visual checking is the most frequently used strategy as reported by both grades four and ten learners at all levels of achievement with the total mean score of 1.64. It also shows that the average students' mean score in the use of the visual checking strategy is 1.61 compared to good students (1.63) and poor students (1.67). This means that average students use the visual checking strategy more often than good and poor students do.

This result is similar to the results of the study by Grabner- Hagen (2004) who found that visual checking is the strategy most used by average students as opposed to good and poor students. One possible explanation is that visual checking might have been given more attention and it is a more regular routine in the classroom than any other strategies to learn spelling. In Oman, students are introduced to use visual checking strategy explicitly from grade 5 upwards. Hence, it seems that grade 10 students tend to use this strategy maybe because of their familiarity with it. It is also possible that students were not introduced to any other strategy so they can vary their strategy use while learning to spell.

4.4 Differences in the Use of Strategies Used by Different Achievement Levels

This section focuses on three strategies: (sounding out, rule use and visual memory). These were the only three strategies where significant differences were found among the three achievement levels, as depicted in **Table 5**.

Table 5. One –way ANOVA and the *p*- value of Significant Strategies Used by each Group of the Achievement Levels

Strategy	Source	Ss	df	Mean Square	F	P-value
sounding out	Between Groups	1.93	2	.96	4.27	*.014
	Within Groups	170.37	754	.22		
	Total	172.30	756			
rule use	Between Groups	14.65	2	7.32	12.64	*<.001
	Within Groups	436.87	754	.57		
	Total	451.53	756			
visual memory	Between Groups	1.20	2	.60	3.18	*.042
	Within Groups	143.29	754	.19		
	Total	144.50	756			

*Ss= Sum of squares, df = degrees of freedom As shown in **Table 5**, students belonging to the three achievement levels, in both grades four and ten significantly differ at the 0.05 level in their use of three specific types of spelling strategies: sounding out, rule use and visual memory with a *p*-value of 0.014, $p < 0.001$ and 0.042 for each strategy.

For more explanation to the above results and to find where the differences were with respect to achievement level group, post-hoc comparisons were carried out for the three strategies, i.e. sounding out, rule use and visual memory, as shown in **Table 6**.

Table 6. Scheffe Test for Post Hoc Comparisons between Means of the Achievement Level Groups in the three Significant Strategies

Strategy	Achievement level	Mean	A	B	C
Sounding out	A	1.78	-	-	0.027
	B	1.83	-	-	-
	C	1.91	0.027	-	-
Rule use	A	1.67	-	-	< 0.001
	B	1.74	-	-	< 0.001
	C	1.99	< 0.001	< 0.001	-
Visual memory	A	2.33	-	-	0.042
	B	2.25	-	-	-
	C	2.22	0.042	-	-

* The mean difference is significant at .05 level

Table 6 shows that in sounding out, the significant difference was between good and poor students in favor of good students with a mean of 1.78 and a p-value of 0.027. This finding means that good students use the sounding out strategy more often than poor students do.

With regard to rule use, there is a significant difference at the 0.05 level with a p-value less than 0.001 in favor of good (1.67) and average students (1.74) compared to 1.99 for poor students. This means that good and average students indicated the use of rule-use strategy more often than poor students did. The table also shows that there is a significant difference at the 0.05 level in the use of visual memory in favor of poor students, with the mean score of 2.22 and a p-value of 0.042. This means that poor learners indicated the use of visual memory strategies more often than good and average students did.

The finding regarding sounding out contradicts the result in the study by Grabner-Hagen (2004), who found that poor students indicated the use of sounding out more often than good students. The reason of the present study's finding might be because good students try to use sounding out to practice listening to the correct pronunciation of the word and to be able to spell the word. Another justification could be that poor students are not able to sound out the word and might have problems in trying to recognize the correct pronunciation of the word and spell it. This is because English is taught as a foreign language and the surrounding context is only Arabic, except for a few exceptions in the media and in classroom lessons. Students in Oman have problems in sounding the words and letters out loud. They were not introduced to words in earlier grades to say the words or letters; instead teachers used visual or whole word reading strategies to learn the words, and therefore, students used visual strategies to learn spellings of words. Recently, jolly phonics is introduced and most students started to sound the words and letters to help them learn spellings of the words.

4.4.1 Other strategies

Besides the main types of strategies identified in the literature and investigated in the study, the questionnaire has also sought to identify differences between the three achievement levels in another strategy, that is, writing the word's pronunciation in Arabic to help students spell the word correctly. In **Table 7**, the students reported the use of Arabic to remember the spelling of the words. This was done for all the three achievement level groups A, B & C. They spelt the words in Arabic letters.

Table 7. Scheffe Test for Post Hoc Comparisons between Means for the Achievement Level Groups in the three Significant Strategies in the Other Strategies

Strategy	Achievement level	mean	A	B	C
I write the word's pronunciation in Arabic to help me spell the word correctly.	Group A	2.30	-	-	p <0.001
	Group B	2.14	-	-	0.04
	Group C	1.97	p <0.001	0.04	-

* Note * the mean difference is significant at .05 level

Table 7 shows significant differences between the different achievement level groups. It depicts that there are statistically significant differences between good and average students compared to poor students in favor of poor students. The mean score for poor language learners (1.97) indicates that they write the words' pronunciation in Arabic, their first language, more often than good and average students do (A=2.30, B= 2.14). This result shows that poor students tend to use their first language to learn spelling as a strategy. One possible explanation is that poor achieving students have less language repertoire and less strategies to use to learn spelling. Therefore, teachers should provide poor or low language achievers more strategies to learn spellings of the words and reduce the use of the first language to learn spellings as a strategy.

4.5 Further Analysis

Besides the list of strategies derived from the literature and investigated in the study through the questions, students in grades four and ten were also asked in an open-ended-question to list the additional strategies they might be using. **Table 8** shows different strategies that students also use along with the above used strategies.

Table 8. Other Strategies Used by Grades Four and Ten Students

Strategy	N	Percent
No other strategies	304	40.2
Writing words for several times or memorization	185	24.4
Listening to or creating rhyming words to learn the spelling	101	13.3
Reading the words from movies on TV and learning the spelling.	92	12.2
Reading the words in printed stories and learning the spelling.	50	6.6
Using computer games and mobile phones to learn the spelling of words.	25	3.3

Note: Total number = 757

As shown in **Table 8** students added other strategies that they use in their real life such as listening to rhyming words, which represents 13.3%, writing words repeatedly “Written repetition” (24.4%), watching TV programs/movies (12.2%) and reading printed stories (6.6%). It is interesting that they added computer games and mobile phones (3.3%) to the list of strategies they use. About 40.2% did not add any other new strategies to learn the spelling of words.

Using spelling games was also one of the recommended strategies by Al Farsi (2009) who investigated the effect of spelling e-games on learners’ spelling performance. The study revealed that spelling e-games increased learners’ desire to learn in the experimental group and therefore it got higher scores than the students in the control group who did not use the same electronic games in spelling words. The learners reported the use of written repetition or writing words several times as a suitable strategy to learn spelling. This finding was supported by Al-Harrasi (2002) who found that the use of written repetition is a high-use strategy for learning the spelling of words. From the above findings in **Table 8**, it was clear that Omani EFL learners indicated the use of different strategies other than the ones they used in the class. Interestingly, the use of mobile phones to learn spelling, which is considered as a widespread technology innovation, has replaced manual techniques to learn spelling i.e., paper and pencil. This perhaps executes the motivation of children towards paper tests at schools because they tend to use the new devices and mobile phones more often than paper-based contents.

4. Conclusions and Recommendations

The present study was set to identify the types of strategies that young and older students tend to use while learning to spell. It also investigated the effect of both gender and achievement level on students’ use of spelling learning strategies. Findings of the study revealed that there was a statistically significant difference in the use of all strategies except for analogy, syllabification and writing synonyms. All the significant differences were in favor of grade four except for the visual checking strategy, which was in favor of grade ten students. Regarding gender differences, there were statistically significant differences in the reported use of the syllabification and visual checking strategies in favor of female students and a statistically significant difference in the reported use of the visual memory strategy in favor of male students. With regard to the reported use of spelling strategies with respect to the level of achievement, it was found that the most commonly reported spelling strategy was visual checking by both grade four and ten in favor of average students.

It is worth mentioning that in the open-ended question, the students reported the use of other strategies such as memorization (written repetition), creating rhymes, spelling e-games, using mobile phones, printed stories and TV movies to learn the spelling of words. Taking this into consideration, curriculum designers should make systematic improvements to the curriculum educational media so as to make the curriculum adhere more to the modern and current trends in education.

Based on the results of the study a number of recommendations are made regarding the spelling learning strategies. These are targeted towards the Ministry of Education, EFL teachers and supervisors. Teachers should give students opportunities to identify their preferred ways to learn spelling in the classroom and then introduce those ways to other students who may find them useful. It is the teachers’ role to introduce monolingual dictionaries in the classroom and ask students to utilize them in and outside class. It is important to teach students various strategies and incorporate strategy instruction that suits different levels of achievement. Further studies should be conducted to find whether the use of the first language such as Arabic, might have an effect on learning spelling as a strategy. Practitioners should introduce and provide supplementary materials such as CD spelling games, CD spelling rhymes, and dictionaries (English-English) in the classroom. Moreover, supervisors should give the senior teachers and

teachers time to plan spelling sessions in which they can introduce more advanced spelling strategies and train students to use them in and outside classes to become more self-directed students and independent learners.

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