Introduction

Spelling words accurately is not an easy process. Instead, it is a complex developmental skill. Due to this fact, a number of studies have recently investigated learners' spelling ability and how this skill develops in different stages (Ehri, 2000; Greenberg, Ehri, & Perin, 2008; Reece & Treiman, 2001). Learning to spell is no longer considered a mechanistic activity involving the memorization of letter-sound-correspondence rules and their exceptions. Instead, it is viewed as a developmental process and a "highly complex intellectual accomplishment" (Henderson, 1985, p. 2).

In the past, spelling was typically taught as a separate subject; memorization was thought to be the key to its mastery. Even at the present time, spelling, in many Saudi schools, is treating as a subject separately from the other language arts. Nowadays, research has shed new light on the acquisition of spelling knowledge. The essential idea is that students or learners pass through different stages of spelling development as they become more literate writers and readers of English. Spelling is now viewed as a complex developmental process that occurs throughout five developmental stages. The stages of spelling development are generally identified as *prephonetic, phonetic, patterns within-words, syllable juncture,* and *meaning-derivation* (Cramer, 1998).

The current study investigates the developmental nature of Saudi intermediate school students' acquisition of spelling knowledge. Further, it examines whether the target group of students' spelling performance changes based on their grade level and word-level complexity. The present study is meant to seek answers for the following questions:

1. Are there identifiable features of spelling development for Saudi intermediate school students as measured by *Schlagal's Qualitative Spelling Inventory*?
2. Does their spelling performance change based on their grade level and word-level complexity in each list of the inventory?

Literature Review

An overview of stages of spelling development

The spelling process has changed dramatically. Learning to spell is viewed as a developmental process and a "highly complex intellectual accomplishment" (Henderson, 1985, p. 2). Like other language activities, learning to spell involves the acquisition of complex rules and a variety of strategies for processing English writing as a multilevel system with underlying regularity. Studying the developmental stages of spelling has become an essential issue to understand the spelling system. Many researchers have defined, refined, and renamed the stages for this purpose. According to Henderson (1985), EFL learners pass through five stages of spelling, which are *preliterate, letter name, within word pattern, syllable juncture,* and *derivational stage*. Gentry and Gillet (1993) classified the stages as *precommunicative, semiphonetic, phonetic, transitional,* and *correct spelling*.

Cramer (1998) presented the following classification scheme: *prephonetic, phonetic, patterns within words, syllable juncture,* and *meaning derivation* (as cited in Hamdan, 2001). In this framework, learners progress from squiggles and marks on a page in their early years to the sophisticated use of spelling patterns that mark an accomplished speller. Gramer's (1998) classification scheme is used throughout this study.

Prephonetic stage

The prephonetic stage occurs before students understand that letters are associated with sounds. This stage is characterized by squiggles, random marks, and letters or words that students have copied. The prephonetic stage is distinguished from the following stages because there is no systematic connection between letters and sounds (Cramer, 2001). Students' writing at this stage typically includes various forms of scribbling, letter-strings, numbers, and drawings. Due to the lack of systematic connection between letters and sounds, students convey meaning with the "mock" writing they produce.

Phonetic Stage

The phonetic stage, or letter name stage, is the beginning of spelling literacy. Students reflect letter-sound connections in their writing. At this stage, spellers tend to represent consonants more accurately than vowels. The spellers use letters that provide a partial mapping, but not complete mapping, of the phonetic representation of the target word (Hamdan, 2001).

When the sound of a letter in a word resembles the name of that letter, students use that letter to spell the sound. Students perceive these letters and their sounds to be closely associated. Thus, they attempt to match letter names to sounds. For example, "they may spell *time* as *tm* or *tim* because the letter names *t, i,* and *m* closely resemble the sounds *t, i,* and *m* make in *time*" (Cramer, 1998, pp. 14-15).

Patterns Within Words Stage

The patterns within words stage refers to misspellings having sequences of letters that correspond consistently to sound or meaning. Students become aware of patterns of short and long vowels during this stage. For example, the silent final *e* marks or signals that the preceding vowel is long. Cramer (1998) says that students at the beginning of this stage realize spelling is not simply a one-to-one letter to sound correspondence, as they thought during the earlier stage. Now, they tend to spell long vowels correctly, or a "marking" vowel may appear in a misspelling. For example, *"boat* may be spelled *boet* and *cake* may be spelled *caik*" (Cramer, 1998, p. 20).

During this stage, students become aware of patterns of short and long vowels. Short vowels tend to be spelled correctly: "no longer is word confined to concrete linear matching of letters to sounds. Instead, patterns begin to function relationally" (Henderson, 1985, p. 11).

Syllable Juncture Stage

A syllable juncture is "the place within a word where syllables meet. Letters are often dropped, doubled, or changed at the juncture of syllables" (Cramer, 1998, p. 23). Thus, syllable juncture refers to errors that occur where syllables join; for example *timing* may be spelled *timeing* or *timming*. By the time students reach the syllable juncture stage, they begin to adhere to more basic conventions of English orthography. At this stage, students have a basic spelling vocabulary and they have control of many long and short vowel spelling patterns. For example, *egul* may be written instead of the phonetic stage spelling of *egl* for *eagle* (Perfetti, 1985).

At this stage, spelling errors and problems arise within the internal structure of a word where syllables meet. Spellers have to decide whether a word requires one consonant or two. Two concepts must be grasped to understand this principle, according to Bear and Templeton (1998):

1. The final consonant is doubled when adding *-ed* or *-ing* to a word with a consonant-vowel-consonant pattern (CVC) as in *hop-hopping*.
2. The final *e* is dropped when adding *-ed* or *-ing* to a word with a consonant-vowel-consonant-silent *e* pattern (CVCe) as in *hope-hoping*.

Meaning Derivation Stage

Many words have a spelling-meaning connection. Words related in meaning are often related in spelling even though there are changes in sound within the related form (Cramer, 2001). Since students at this stage begin to realize that words have an important spelling-meaning relationship, they are now prepared to examine polysyllabic words. In this regard, Cramer (1998) claimed that "many of the words that must now be learned are derived from Greek and Latin roots" (pp. 25-26). The spelling of these words is mainly based on meaning and derivational principles.

Words related in meaning are often related in spelling in spite of changes in sound within the related form. The spelling-meaning relationship is illustrated in these three meaning-related words: *reside, resident, residential*. "Say these words aloud, and you will notice that the long /i/ in *reside* is reduced to an unstressed, indistinguishable vowel sound (schwa) in the derived forms - *resident* and *residential*. Yet despite the change in the vowel sound in the derived forms, there is no change in the spelling of the vowels. That is, the spelling remains stable in the derived forms despite changes in sound" (Cramer, 1998, p. 25).

Related Studies

Henderson and Beers (1980) studied characteristics of *patterns within word stage* across grades *one* through *six*. The results revealed that bound morpheme spellings appeared within a span of two grades but not all at the same time, indicating that this stage is characterized by a gradual rather than sudden emergence of features.

Furthermore, Templeton and Bear (1992) focused upon the final stage, *meaning derivation*. At this important stage, the meanings of words play a significant role in learning their spellings. They found that sixth to eighth-graders were not clearly aware of semantic connections between derived word forms they were shown (e.g., *sign, signal, origin,* and *original*). Besides, Al-Jarf (2010) investigated the phonological and orthographic problems that Saudi EFL freshmen students have in spelling English (their foreign language). The results indicated that the sample exhibited some spelling difficulty; particularly at the phonological level, that was 63% of the errors. Moreover, Al-zoud and Kabilan (2013) examined spelling mistakes made by 43 Jordanian Learners of English in written composition. They analyzed a total of 228 spelling errors. Results demonstrated that most of the spelling errors are omission and substitution errors. Moreover, students had a problem with using actual words in their writing.

Methodology

The spelling features were chosen and arranged according to the developmental pattern, as suggested by Schlagal (1982). These features include different linguistic aspects, which are (*phonological*, *orthographic*, *syntactic*, and *semantic* elements).

List One

1. R-colored vowels, for example, *girl*.
2. Simple short vowels: /e/,/u/,/i/ and /a/ for example, *bed*, *cut*, *ship* and *want* respectively.
3. E-markers for simple and long vowels, for example, *plane.*
4. The ability to correctly represent two pre-consonant nasal clusters, such as, *bump*.
5. Comparing the student's ability to correctly represent sounds in single-consonant (beginning and endings) in one-syllable words morphemes, for example, *bed* and *mud*.

List Two

1. Presence of inflectional morphemic endings *-ed*, for example, *traded,* and *-es* as in *beaches*.
2. Varied long vowels patterns *˜e , å , oo, oa, a* and *ea*, for example, *queen, train, cool, float, chase,* and *year* respectively.
3. More consonant blends involving incidental affrication, for example, *dress, train, try,* and *drove.*
4. Nasal consonants, for example, *angry*.

List Three

1. The silent letter, for example, *knee, knock,* and *sight.*
2. Diphthongs vowels, for example, *count, noise, caught, mind,* and *sight.*
3. A cluster of 3 initial consonants, for example, *scream* and *straw*.
4. Further *r*- controlled vowels, for example, *thirsty* and *nerve.*
5. Consonant doublets: Cluster of consonant doubling in the middle, for example, *sudden and batter,* and *stepping.*

List Four

1. Consonant alternation: /*k*/ to /*c*/, for example, *cattle, traffic* and *camel* or /s/ to /c/ in *force* and *cellar*.
2. Inflectional past tense endings *-ed* in words, for example, *slammed, checked,* and *gazed.*
3. Final sound "*l*" for example, *curl, cable, cattle,* and *pebble.*
4. Suffix /-ive/ for example, *protective*.
5. Final sound "j", for example, *badge* and *cabbage*.

Subjects Selection and Site

The participants in this study were 7th and 9th male students who study in some of Riyadh intermediate public schools. The sample was 300 students (150 of the 7th graders and 150 of the 9th graders). The classes and subjects are chosen randomly.

Instrumentation

The spelling lists in this study were adopted from Schlagal's (1982) *Qualitative Spelling Inventory* (see Appendix 1). The words, which are listed in four levels, are selected purposefully for this study because they reflect developmental spelling features. In addition, the researcher uses only the first four lists of *Schlagal's Inventory* to be suitable for the students' level as they still study in the intermediate stage.

Procedures of Data Collection

Schlagal's inventory was administered in different schools for one whole semester. Students were asked to spell as best they could, even though they might be uncertain of the spelling of a word. Two spelling lists were administered at each grade level. Thus, grade seven was given lists (1) and (2), while grade nine was given lists (3) and (4).

Scoring

Spelling features scoring scale

The participants' features were scored on a scale ranged between one and four. Score four was given to the complete and correct representation of the target spelling features, while score one was given to the incorrect representation of the features. Score three was given to features close to standard spelling, and score two was given to features further from the standard spelling.

Word spelling scoring scale

The subjects' performances were scored on a scale ranging from one to four. The scoring scale was given as follows:

1. Score one was given to a subject if the word was spelled substantially incorrectly.
2. Score two was given when the word is misspelled, but had a possible standard spelling.
3. Score three was given when the word was misspelled but had a higher correlation to the standard spelling.
4. Score four was given to substantially correctly spelled words.

Data Analysis

T-test analysis is used to analyze the answers to the study's questions and also to compare each grade level performance on each of the lists. In addition, frequencies and percentages were used.

Findings

1. Features/patterns of spelling development for Saudi intermediate school students as measured by the Schlagal's Qualitative Spelling Inventory.

Table 1. *List one's spelling features for the 7th-grade*

Words	Frequency & Percent	Spelling Features			
		Incorrect Representation	Further from Correct	Close to Correct	Correct Representation
1.girl	F	62	44	27	17
	%	41.3	29.3	18	11.3
2.bump	F	41	82	21	6
	%	27.3	54.6	14	4
3.plane	F	93	29	24	4
	%	62	19.3	16	2.6
4.ship	F	9	8	77	56
	%	6	5.3	51.3	37.3
5.cut	F	3	12	22	113
	%	2	8	14.6	75.3

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Table 1. shows that (75.3%) of 7th-graders correctly represented the feature of single consonants whose sound resemble their names as in *cut*. The feature of two pre-consonant nasal clusters in *bump* was represented further from correct representation by (54.6%) of the students. The feature of E-marker for vowels in *plane* was represented incorrectly by (62%). The feature of simple short vowel in *ship* was represented close to correct by (51.3%) of the students. Furthermore, (41.3%) of seventh-graders incorrectly represented the feature of *r*-colored in *girl.*

Table 2. *List two's spelling features for the 7th-grade*

Words	Frequency & Percent	Spelling Features			
		Incorrect Representation	Further from Correct	Close to Correct	Correct Representation
1.traded	F	16	20	74	40
	%	10.6	13.3	49.3	26.6
2.beaches	F	23	31	32	64
	%	15.3	20.6	21.3	42.6
3.cool	F	50	79	11	10
	%	33.3	52.6	7.3	6.6
4.dress	F	44	80	18	8
	%	29.3	53.3	12	5.3
5.angry	F	79	43	19	9
	%	52.6	28.6	12.6	6

Table 2. reveals that the feature of double consonants in final position in *dress* was represented further from correct representation by (53.3%) of the students. In addition, the feature of inflectional morphemic endings –*ed* in *traded* and –es in *beaches* was represented close to correct by (49.3%) and correctly by (42.6%) of students respectively. The feature of nasal consonants in *angry*, (52.6%) of spellers misrepresented it. The feature of long vowels in *cool* was represented further from correct representation by (52.6%) of the students.

The results of both tables one and two show obviously that 7th-grade spellers were at the *Phonetic Stage* because most of the spelling features misrepresented or further from correct in list one and two above fell within *Phonetic Stage*.

Table 3. *List three's spelling features for the 9th-grade*

Words	Frequency & Percent	Spelling Features			
		Incorrect Representation	Further from Correct	Close to Correct	Correct Representation
1.knock	F	17	30	37	66
	%	11.3	20	24.6	44
2.caught	F	20	19	36	75
	%	13.3	12.6	24	50
3.scream	F	6	7	81	56

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	%	4	4.6	54	37.3
4.thirsty	F	11	16	40	83
	%	7.3	10.6	26.6	55.3
5.sudden	F	16	18	42	74
	%	10.6	12	28	49.3

Table3. demonstrates that the feature of silent letter in *knock* was represented correctly by (44%) of the 9th graders. The feature of diphthongs vowels as in *caught* was represented correctly by (50%) of students. Moreover, The feature of cluster of three initial consonants in *scream* was represented close to correct by (54%) of them. The feature of *r*-controlled vowel in *thirsty* was represented correctly by (55.3%). Moreover, The feature of cluster of consonant doubling in the middle in *sudden* was represented correctly by (49.3%) of the students.

Table 4. *List four's spelling features for the 9th-grade*

Words	Frequency & Percent	Spelling Features			
		Incorrect Representation	Further from Correct	Close to Correct	Correct Representation
1.force	F	23	35	32	60
	%	15.3	20.6	21.3	40
2.slammed	F	18	31	36	65
	%	12	20.6	24	43.3
3.curl	F	10	25	41	74
	%	6.6	16.6	27.3	49.3
4.protective	F	24	32	35	59
	%	16	21.3	23.3	39.3
5.badge	F	7	10	78	55
	%	4.6	6.6	52	36.3

Table 4. indicates that the feature of final sound "l" in *curl* was represented correctly by (49.3%) of the graders. In addition, the feature of final sound "j" in *badge* was represented close to correct by (52%) of students. The feature of inflectional past tense endings *-ed* in *slammed* was represented correctly by (43.3%) of participants. Moreover, the feature of consonant alternation /s/ to /c/ as in *force* was represented by (40%) of them. Regarding the feature of suffix /-ive/ as in *protective*, (39.3%) of spellers represented it correctly.

The results of both tables three and four above reveal substantially that ninth grade spellers left the *Phonetic Stage* and moved to *Patterns Within Words Stage* or *Syllable Juncture Stage*. In fact, ninth-graders' spelling features representations indicate an obvious transition from a stage to another stage.

2. Spelling performance of Saudi intermediate school students based on their grade level and word-level complexity.

The results show that the 7th-grade students varied in their spelling performances regarding the words given to them in both lists *One* and *Two*. There were some words spelled correctly by high percentage scores such as *cut*, *dress*, *cool* and *ship* while some other words misspelled such as *bump* and *beaches*; or further from the correct standard spelling such as *girl*, *plane*, *traded*, and *angry*. It is obvious that the 7th-grade students' performances in list *One* differed from that in list *Two*. This variance was due to word-level difficulty or complexity. Accordingly, the 7th-grade students' spelling performances were decreased with the increase of word-level difficulty or complexity. In terms of lists *Three* and *Four*, the results of the 9th-grade students varied in their spelling performances. There were some words spelled correctly by high percentage scores such as *knock*, *scream* and *force*. While some other words misspelled such as *thirsty* and *badge*; or further from the correct standard spelling such as *caught*, *sudden*, *protective*, and *curl*. The 9th-grade students' spelling performances were decreased with the increase of word-level difficulty or complexity.

Discussion and conclusion.

In terms of students' *Spelling Features*, the results indicated that spelling patterns of Saudi intermediate school students varied according to their developmental levels based on Schlagal's Qualitative Spelling Inventory (1982). Moreover, results showed a variance of scores on spelling features presented in the four lists given to seventh and ninth graders. Subjects' scores varied on the four lists. This variance was due to spelling features difficulty level presented in the lists. For example, the seventh and ninth graders scored lower on lists two and four. Most of the spelling features misrepresented in lists one and two fell within *Phonetic Stage*. On the other hand, spelling features misrepresentations in list three and four indicated a transition from the *Phonetic Stage* to *Patterns Within Words* Stage or *Syllable Juncture Stage.* On the other hand, in terms of students' *Spelling Performance*, the results revealed obviously that 7th and 9th grade students' performances in lists *One* and *Two* differed from their performances in lists *Three* and *Four*. This variance or difference was due to word-level difficulty or complexity. On the other hand, the results revealed that there were statistically significant differences between the spelling of the seventh-grade and ninth-grade in the four lists.

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Appendix

Appendix A. Schlagal's (1982) qualitative spelling inventory *

List 1	List 2	List 3	List 4	List 5	List 6

girl	traded	send	force	lunar	satisfied
want	cool	gift	nature	population	abundance
plane	beaches	rule	slammed	bushel	mental
drop	centre	trust	curl	joint	violence
when	short	soap	preparing	compare	impolite
trap	trapped	batter	pebble	explosion	musician
wish	thick	knee	cellar	delivered	hostility
cut	plant	mind	market	normal	illustrate
bike	dress	scream	popped	justice	acknowledge
trip	carry	sight	harvest	dismiss	prosperity
flat	stuff	chain	doctor	decide	accustom
ship	try	count	stocked	suffering	patriotic
drive	crop	knock	gunner	stunned	impossible
fill	year	caught	badge	lately	correspond
sister	chore	noise	cattle	peace	admission
bump	angry	careful	gazed	amusing	wreckage
plate	chase	stepping	cabbage	reduction	commotion
mud	queen	chasing	plastic	preserve	sensible
chap	wise	straw	maple	settlement	dredge
bed	drove	nerve	stared	measure	conceive
	cloud	thirsty	protective	protective	profitable
	grabbed	baseball	traffic	regular	replying
	train	circus	honey	offered	admitted
	shopping	handle	cable	division	introduction
	float	sudden	scurry	needle	operating
			camel	expression	decision
			silent	complete	combination
			cozy	honorable	declaration
			graceful	baggage	connect
			checked	television	patient

*Nunes, T., Bryant, P. and Bindman, M. (2001, p. 124).