INVENTED SPELLING IN ARABIC: WHAT DO UNITED ARAB EMIRATES (U.A.E) SIXTH GRADE STUDENTS KNOW ABOUT ARABIC SPELLING

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ABSTRACT

This study explores invented spelling in Arabic. Since spelling in the United Arab Emirates (UAE) is taught through dictation and composition, this study explores and compares spelling inventions that occur in students’ writing in each context. Samples of dictation and composition were collected from three sixth grade classrooms taught by UAE teachers. In addition, this study aimed to investigate what sixth grade students in the UAE know about Arabic spelling. A number of features were examined to explore the participants’ knowledge and use of certain Arabic spelling rules. Spelling inventions were categorized into three linguistic levels for analysis: 1) phonological level, 2) grammatical level, and 3) orthographic level to answer three of the research question. The findings of student’s spelling inventions in their compositions were compared to those found in dictation.

Interviews were also conducted to supplement written samples, and to study what sixth grade students report that they do when Arabic standard spelling is unknown.

In practice, this study will serve Arabic teachers in the Arabic world as a resource in teaching, evaluating, and understanding invented spelling. Students' invented spellings must be seen as opportunities to contribute actively to their own learning. By combining an understanding of invented spelling with formal spelling instruction, teachers will develop more effective spelling instructions.

Findings included: sixth grade students’ spelling inventions that occurred in dictations reflected the phonological level primarily; writing compositions drew students’ attention to meaning making rather than writing every word accurately; students wrote
spontaneously and used their knowledge of information, poems, Koran and Hadith in their compositions. When standard spelling is unknown, students reported that they have many strategies to overcome spelling difficulties such as sounding out, asking for help, visualization, etc. However, they do not advise other students who have spelling difficulties to use the same techniques they use in the same order.
CHAPTER 1

LEARNING TO SPELL IN ARABIC

Language learning is a lifelong process of invention. Invention is driven by the need to communicate, learn, and think in order to survive and grow (Goodman, 1996). Inventions are not random. Children, like all human beings, invent because they have authentic function, purpose, or need for language in their socio-cultural community (Halliday, 1975) and have “linguistically sophisticated reasoning” (Cramer, 1998, p. 15). Children invent by providing their best guesses, theories, or hypotheses based on their perception and understandings of the world and how it works (Ferreiro, 1999). According to Goodman (1993) both oral and written inventions are natural in language learning because human beings are driven by need to solve daily problems and to make sense of the world. In addition, inventions are vital in language learning because fearing to take risk and to try alternatives may delay learning. Both Piaget (1973) and Vygotsky (1978) declare that it is crucial for language learners to take risks if learners are to learn and grow.

Children become writers long before they ever put any conventional words on a page. Through many developmental stages, children denote meaning on paper with pictures, scribbles, random letters, and eventually words. This pre-conventional stage is known as invented spelling. Also known as developmental, temporary, phonic, sound, or constructed spelling, invented spelling is a natural stage that every student experiences and he/she pass through at their own pace (Wilde, 1992).
Children invent purposefully and intentionally. When children invent, they employ their experiences, knowledge, and beliefs about language and the world. Children continue to invent language conventions until they seem to have "internalized" that social language (Vygotsky, 1978) along with their community and family values (Halliday, 1975). When children are aware that their inventions are noticed and that they are different from what families and teachers call “convention”, they experience tension or disequilibrium (Piaget, 1973). As a result, children react differently to these inventions and usually ease the tension by revisiting and reinventing.

In the United Arab Emirates and for many years, spelling instruction consists of rote memorization of a weekly list of words or a text followed by a dictation. Teachers sometimes teach spelling the way that they were taught, and it becomes difficult to change the many beliefs and practices about spelling instruction. There is almost no research on student’s knowledge about the Arabic written system. Yet research in other countries such as Germany, USA, Israel, and Iran suggests that there are alternative ways to understand and teach spelling, and that spelling instruction should be looked at as a whole, which is an aspect of language (Mirzaei, 2002).

Objectives of the Study

The present study investigated what Arabic children of the United Arab Emirates (UAE) know about the written system of the Arabic language when they invent as they write. With such knowledge, teachers can provide better classroom practices for fostering spelling invention and development. Most elementary schools in the UAE particularly
and the Arabic world in general teach spelling as an isolated subject from the other language arts, because memorization is thought to be the explanation to its mastery.

Behaviorists view incorrect spellings as formation of bad habits. On the contrary, a corpus of studies explains children's attempts at writing as evidence of the active process of meaning making and indicates their knowledge about language (Burris et al., 1982). This study builds on a theory of developmental spelling that has evolved from qualitative research on the evidence of children’s invented spelling. Spelling errors made during the process of writing are not viewed as impediments to learning, but as opportunities for the kidwatcher to notice how children make sense of sound-letter relationships.

Statement of the Problem

The theoretical and empirical research is quite rich in describing what is occurring cognitively as children learn to spell especially in English (See chapter 2). What is lacking is an equally rich articulation of how cognition is related to a particular language, such as Arabic. How to teach spelling has long been a controversy. Along with the controversy is the problem of how to convince teachers that invented spelling is an indication of students’ strength rather than a deficit. I have found related literature that discusses invented spelling in English, Spanish, German, Hebrew, and Farsi but no studies addressing the Arabic language (See chapter 2). Arabic is one of the world’s major languages spoken on two continents with a total population of 350 million people. Its alphabet, with some modifications, is used in non-Semitic languages, such as Persian, Urdu, and Kurdish. Swahili, Hausa and other leading African languages used Arabic
alphabets, with modification, that began about sixty years ago (Awde & Samano, 1987) (See literature review in chapter 3). The aim of this study, therefore, is to fill the gap and to study invented spelling in Arabic.

Research Questions

The following research questions are to be addressed:

1. What are the most common spelling inventions among UAE sixth grade students in their dictation?

2. What are the most common spelling inventions among UAE sixth grade students in their composition?

3. What are the spelling inventions similarities and differences found in UAE sixth grade students’ composition and dictation?

4. What strategies do the UAE sixth grade students report they use when standard spelling is unknown?

Significance of the Study

In the Arabic world, the child’s knowledge about how language works as a result of his/ her spelling invention has been ignored (Albajja, 2001). It is imperative for teachers to have insights that invented spelling is not in conflict with conventional spelling, and that it plays an important role in helping children learn about the Arabic writing system. Furthermore, it is important to respond to student’s spelling inventions from the view that children are practicing their growing knowledge of the relationships
among phonemes, the letters of the alphabet, and their confidence in the alphabetic principle (Burns, Griffin, & Snow, 1999).

In practice, this study will serve Arabic teachers in the Arabic world as a resource in teaching, evaluating, and understanding invented spelling. For teachers, students' invented spellings must be seen as opportunities for them to contribute actively to their own learning. By combining an understanding of invented spelling with formal spelling instruction, teachers may be able to develop effective spelling instructions.

The United Arab Emirates (UAE) is considered a new country that was united in 1973 with a population of approximately 4 million people, UAE education is still developing. There are not many studies that focus on UAE students in particular and their development in language. Most of the studies are adopted from other Arabic countries such as Egypt and Kuwait and are modified and applied to UAE students. The importance of this study that it is conducted by a UAE researcher and will consider issues in spelling that has not been studied before such as spelling inventions in composition compared to spelling inventions that are found in dictation, and strategies students use when standard spelling is not known.

Furthermore, this study is important for students too. Students have the right to have their work valued by focusing on their language strengths rather than viewing their misspellings as deficits. Students deserve a time within the curriculum for discussion about writing, spelling inventions, and how language works.

Since this study focuses on a new issue of Arabic education, researchers, educators, and teachers will be introduced to the concept of invented spelling, and its
application to education will reveal other aspects of evaluation and the perception of 
miscues or spelling inventions. By establishing a database of invented spelling in Arabic, 
researchers, teachers, and educators will have a baseline data to bridge the gap and 
explore developmental aspects of learning to spell in Arabic, particularly how invented 
spelling of young Arabic writers relates to early reading and to essential literacy elements 
such as phonemic awareness and phonics.

Since this study is the first to focus on invented spelling in Arabic, I designed 
material for the purpose of analysis that is suitable for the nature of the Arabic language. 
There is no previous data or research in Arabic to build on or relate to.

References about writing and spelling development in Arabic are not sufficient. 
Moreover, spelling inventions in Arabic are often studied based on students’ dictation 
and not compared or related to their writing in compositions to investigate common 
features that may occur in different kinds of writing. Even though studies about invented 
spelling are available in other languages, they may not be applicable to Arabic language 
because of its special writing system.

Limitations of the Study

This study is limited by following:

1. Writing samples come from six grade students in the UAE and for Arabic 
language classes only.

2. The UAE ministry of Education assigns the dictation material used to collect the 
targeted Data.
3. The topic of the composition and its title was given to the students to collect the desired information and was assigned by the UAE Ministry of Education.

Collecting data has its limitations as well. It is not easy for teachers to change their instructions and let students invent spelling to study how they grow. Teachers have a designated time for teaching the language curriculum and they cannot waste class time for research.

The outlines of this dissertation:

Chapter I: I introduced the study, its significance, objectives, research questions, and limitations.

Chapter II: I provided a rich background about the concept of invented spelling, and stages of spelling development. In addition, I explained the relation between invented spelling and reading, invented spelling and writing, and dialect and spelling. Moreover, I focused on invented spelling versus traditional spelling, invented spelling and education in general and invented spelling in the Arab World specifically, and invented spelling in other languages such as English, German, Dutch, Spanish, Hebrew, and Farsi.

Chapter III: I introduced a brief sketch about Arabic language scripts, and explored Arabic literature that focused on spelling.

Chapter IV: I designed the study methodology where I explained the design and procedure, introduced participants, and explained the process of data collection, analysis, and interpretation.

Chapter V: I provided results, interpretations and discussions of data collection.
Chapter VI: I discussed my conclusions and implications and made suggestions to apply the conclusions to UAE classrooms and the teaching of Arabic Spelling.
Invented Spelling

Discussions of invented spelling often start with the work of Charles Read (1971) who observed preschool children’s writing and the way they spell before receiving formal instruction (Sipe, 2001). The term “Invented Spelling” was coined in 1971 along with some synonyms such as “developmental spelling” and “creative spelling” and they all refer to writers’ invented spelling based on their knowledge of language (Wilde, 1992).

Invented spelling refers to children’s own spelling until they get the rules. Carol Chomsky identifies invented spelling as a pattern of spelling children invent before they learn to read as a way of language innovation (Chomsky, 1975). Invented Spelling is important for young writers since they only know how to spell a few words (Cramer, 1998).

Invented spelling is not a cover or an alternative term for misspelling. Misspelling or errors indicate that the writer tried to use the right spelling but he missed it. Invented spelling, in contrast, indicates that writers are “actively involved in their own re-creation of written language” (Wilde, 1992, P 3).

Invented spelling describes beginner writers’ efforts to spell and write what they have not mastered yet. Young children have a huge storage of oral vocabulary that they want to transform into a written language. If children want to get all the words spelled perfectly “right”, they may wait until third or forth grade to write. Otherwise, inventions
are the expected outlet for children’s written language in young age. Invented spelling is not a permanent alternative for standard spelling. Invented spelling does not delay or inhibit a healthy development of spelling and writing. In contrast, invented spelling directs and improves the development of spelling and reading and writing as well (Cramer, 1998).

Richard Gentry visited a school to examine first through fourth grade students’ spelling level. He found that there were no books, documents, or spelling sheets teachers used to teach spelling. Nevertheless, teachers were confident of their student’s writing and spelling. Gentry was impressed to find that students were above their grade level in their writing and spelling. He found that teachers engaged students in authentic and purposeful writing and did not spend time on spelling lists. This resulted in students’ improvement. He found out also that these young students were excellent readers who had a rich literacy environment in the classroom. Routman, 2000, suggests that teaching student to apply criteria for excellent writing may improve their writing skills more than sending them back to work on their papers.

I relate Gentry’s experience as proof that it is not realistic to teach children that spelling is easy when it is not. Learning to spell may be easy for some students, but on the other hand, it can be extremely difficult for other children or even adults. Language is complex. Sounds and letters in English do not match one-to-one and each spoken word has its written form. The way children invent spelling helps them teach themselves about phonics and, with guidance, they can gradually have more control over the written language. (Wilde, 1997)
In teaching, kidwatching is crucial. Teachers need to pay close attention to what children are writing and what tools they are using, bearing in mind how they come up with their spellings. Laminack and Wood (1996) pointed to “Curriculum-watching” as a crucial factor for teachers to notice. Teaching spelling for the test, and maybe dictation in the Arabic world, does not guarantee transferring correct spelling to writing. The authors suggest giving children the opportunity to walk the path of their own exploration as they write and invent (Laminack & Wood, 1996).

Stages of Spelling Development

Drawing works for children similar to talking as a way of expressing their ideas. Drawing is flexible in that it allows children to tell about characters, events, and setting. Kidwatchers do not oblige children to start with drawing or with writing as long as their way of expressing their ideas is working for them. Gradually, most children focus on constructing meaning and begin to find problem solving techniques as writers. Young children tend to spell their names and the names of the important people in their lives conventionally, Even though some of them are not in the alphabetical stage (Goodman, 2002).

Emelia Ferreiro (1982) studied invented spelling of children who had not received any formal instruction. Her results concluded that children’s awareness of written language integrates three levels of conceptualization: differentiating between drawing and letter writing, refining the qualitative and quantitative discrimination between constructed strings of letters, and relating written to oral language. Ferreiro and Teberosky believed that the development of literacy begins before school. Before
schooling, children cannot be called illiterates or pre-literates because they have already established ways to literacy. The authors also drew the reader’s attention to the environmental print where children find themselves surrounded by literacy. Signs, containers, bills, and newspapers are some examples of these prints. Interestingly, children can be influenced by environmental prints so more than by books because they tend to invent capital letters only like those found in the environmental prints, while in books both capital and lower case letters can be found (Ferreiro & Teberosky, 1982).

Moreover, Ferreiro and Teberosky stated a sequel of development for preschoolers in which they can predict spelling:

1- The invented word would be longer if the conventional one is longer, bigger, or older. For example, carrot is longer than car and mug.

2- The number of characters (numbers, letters, or shapes) is fixed when inventing a word or an entire sentence. Rearranging these fixed characters has different meaning for children.

3- In the same way, the writer can invent different words that stand for the same thing; M1A2 can be read Mummy for instance or Dorothy (Buchanan et al., 1984).

4- The number of letters invented indicated the number of the word syllables, with each letter indicating a syllable.

5- Symbols can be inserted to indicate a sound value that is smaller than a syllable.

Gentry has another view of the stages of spelling development. According to Gentry (1987) there are five stages of spelling development:
1- **Prephonemic Spelling**: Preschoolers tend to write messages that do not represent phonemes or speech sounds. Scribbling, stringing letters together without awareness of sound-letter correspondence are examples of writing at this stage.

2- **Early Phonemic Spelling**: Kindergarteners and beginners of first grade have limited awareness of letter-sound correspondence. For example, writing *nt* for *night*.

3- **Phonetic (or letter-name) Spelling**: Ending kindergartners and first graders at this stage understand the concept of a word and are able to represent most phonemes. However, the child at is still not reading well.

4- **Transitional Spelling**: First through third graders grasp more information about spelling patterns. Children at this stage apply rules that are not importantly accurate; they, for example, may write *scared* as *skared*.

5- **Standard Spelling**: Middle-end third graders or fourth graders at this stage spell most of the words correctly. Children at this stage are ready to learn homonyms, contractions, irregular spellings, word endings, vowel combinations, prefixes and suffixes, etc. Even though children may misspell some words, they would invent what seems to be correct for their developmental level. Intermediate students should be able to spell conventionally (Routman, 2000).

Henderson (1990) also has his own view where he puts the developmental stages in this sequence:

1- **Alphabet Principle**: Children are stuck to one-to-one correspondence.
2- **Pattern Principle**: Children realize that there is more than letters and sounds, such as blends. He called this stage “within word pattern”.

3- **Pattern by Meaning Principle**: Children in this stage can differentiate the orthographic features that are associated with meaning (Abouzeid & Invernizzi, 1994).

Bear et al. (2000) in “Words their Way” addressed five stages of spelling development. These stages overlap with Gentry in some areas. For Bear, and the other authors of the book, the stages are:

1. **Emergent Readers and Writers**: Children have no sound-letter relationship.
   
   Children approximate pictures with letters or scribbles. This stage is called pre-phonetic by other researchers (Cramer, 1998).

2. **Letter Name-Alphabetic**: In this stage, children begin to associate sound and letters. At the beginning, children tend to use first consonants, then add the last ones, and finally first and last consonant with a vowel.

3. **Within-Word Pattern**: This is a crucial stage in the child’s reading and writing development. Children in this stage move from letters to words or word chunks. Children in this stage also become more aware of the sounds and the combination letters that represent certain sounds. Moreover, in this stage children develop the recognition of consonant-vowel patterns. Finally, children gain a significant number of new vocabularies in this stage, 200-400 new words.

4. **Syllables and affixes**: Syllables in this stage come together.
5. **Derivational relations:** Children move from the need of reading word by word into meaning making. Students at this stage are ready to study word origins and bases (Bowers, 2003).

The stages above are not associated with age, but with the stage of development. Looking at spelling in this new way not only shows how children think about orthography in their spelling development, but it also indicates the ongoing sequence of spelling behavior (Gentry, 2000). As young spellers mature, they continually apply and refine their knowledge of spelling conventions (Bowers, 2003).

**The Controversy of the Occurrence of Stages**

Some theories explain development in terms of the child’s progress through a series of stages. In a particular stage, an organization of thought and behavior is qualitatively different from that of an earlier or later period (Bukatku, 1998). In this view, development undergoes transitions as one stage ends and another one begins. From this perspective, the child passes through unique phases of personality development.

Do all children proceed along the same path in their development? Biological and experiential differences contribute to behavior and competency. I believe that every individual child grows at his own pace and may or may not pass the same sequent of stages. For instance, some children may walk before they crawl. Looking at the child’s physical, perceptual, emotional, cognitive, and social development makes the child a unique individual.

Even though Piaget stated the developmental stages of cognitive development, he declared that the progress through these stages is not adventitious. Learning must be
nurtured (Buchanan, 1984). In that invented spellings are not random, they need to be nurtured too. When looking at these misspellings, kidwatchers should look at them qualitatively to determine “what knowledge and strategies a student is using” (Buchanan, 1984, p. 122).

Teachers can benefit from the above stages to understand students’ development better and design or apply instructions suitable for each stage. I do not mean designating instructions for each age group. Understanding the developmental stage enables the teacher to have a deeper view of what the child undergoes and, based on that knowledge, provide suitable instructions.

Generally, when teaching spelling, the teacher draws the students’ attention to listening and looking at particular letters and letter combinations, rhymes, ways to figure out unfamiliar words, patterns, and meaning. Teachers’ role in understanding developmental stages is to help students think about what strategies they use to figure out how to spell words.

Understanding these stages of development makes the teacher value every new invention and celebrates the fact that the student’s invention is logical and may be beyond spelling (Calkins, 1986).

Invented Spelling and Reading

It is important also while I am introducing invented spelling to relate it to early reading. Beginner readers are different from beginner spellers in that readers focus more on comprehension and prepare themselves for retelling (Wilde, 1997). In contrast,
beginner spellers think more of letters and sounds and how to blend them together to
write a word. Beginner inventors seem to spell words according to sounds they hear.

Are good readers necessarily good spellers? Treiman (1998) suggests that rich
reading is not enough to be a good speller. She claims that providing a young child with
literature until he is a fluent reader does not confirm his spelling accuracy. In Treimans’
point of view, this issue is not that simple. Shanahan (1984) suggests that reading and
writing are both independent and dependent skills and being fluent in one does not
confirm being fluent in the other one. Studies about children with dyslexia support the
previous claim. These children had rich reading instruction and arrived at a “normal”
reading level but continue to be poor spellers. However, Treiman (1998) suggests that the
previous claim does not negate that there is a transfer from reading to writing.

Invented spelling has many profits in addition to what it informs us about young
inventors, which will be discussed later in this paper. Cunningham and Cunningham
(1992) found invented spelling increased reading instructional values, helped students
become better spellers, and increase children’s decoding ability. This opens another
subject about the spelling-reading relationship. The work of Zutell and Rasinski (1998)
found that spelling variables are highly correlated to children’s oral reading accuracy. In
research work with first, second and third grader, Gill (1989) asserts that spelling and
word recognition abilities are strongly associated processes (Cramer, 1998). Hall (1991)
confirms previous researches by explaining how good spelling is connected to accurate
reading of those words in second grade (Cramer, 1998). Cunningham and Cunningham
(1992) believed that decoding and invented spelling are mirror-like processes because the
student obtains the information from same store of phonological knowledge. The work of Chomsky reveals how providing children with the environment where their invented spelling is acceptable enhances their decoding ability in reading (Cunningham & Cunningham, 1992).

On the other hand, some researches found that although spelling tends to be highly related to reading level, spelling is not a reading product. Both reading and spelling are acquired differently and each one has its own independent processes. Research also found that alphabetic knowledge (sound-letter relationship) develops in spelling before it does in reading. Then again, orthographic knowledge develops in reading before spelling (Bedford et al., 1997). Clay found that at-risk readers do not benefit from invented spelling because of the lack of phonemic awareness and letter-sound relationship. (Cunningham & Cunningham, 1992)

**Invented Spelling and Mastering Writing Skills**

About 90% of school age children think that they can write (Graves, 1993). Children who were encouraged to write their names, read, and scribble read and write more effectively. Invented spelling is found to support writing and that it is connected to thought. The writer learns that thoughts can be revisited and edited if they are written and that thoughts can be permanent and visible, which makes it different from oral language. By writing at an early age, children learn that all the books they are surrounded by are coming from authors just like themselves. Calkins (1986) narrated a story about a 7 year-old boy who thought books were written by machines until he started to write and learned, by experience, that these books were produced by writers just like him.
According to Garcia (1997) writing and reading are highly connected. If the child were given the chance to write, he would have a similar chance to reread his work. However, it is not important to acquire “perfect” reading skills to start writing (Cramer, 1998). Cramer is against delaying writing and spelling for beginner readers based on the claim that if students cannot spell, they cannot write. He encourages early writing beginning the first day of school or even before. Waiting until the child is 9 or 10 to start writing means waiting years of writing and practice. Children’s written pieces could be accepted, even if the spelling errors outnumber conventional spelling. He suggested visiting a classroom where invented spelling is encouraged. No matter how good spellers students are, how well writing is taught and confidence ensured, the observer will sense a development of spelling because children are “learning to read simultaneously, not in spite of invented spelling but because of it” (Cramer, 1998, p. 83). Moreover, Cramer, found four interconnected skills children should have to start writing:

A- Ability to write the letters of the alphabet

B- Ability to segment sounds (phonemic awareness)

C- Knowledge of letter-sound relationships

D- Knowledge that the letter-sound relationship is written left to right in English (and in different directions in some other languages) (Cramer, 1998).

Chomsky (1979) stated that children should start writing even though they cannot spell words correctly. Children should have a risk-free environment where they can use the words they wish to use even if they do not know how to write them. This claim brings us back to the fact that spelling is not a purpose in itself and that it is not a writing a tool.
Invented Spelling and Children’s Language Development

Children’s invented spelling is not accidental and does not indicate ignorance. It is “rule-governed attempts to apply the alphabetic principle to the sounds of the English language” (Abouzeid & Invernizzi, 1994, p. 156). Invented spelling is an indication of children’s development toward control of the language processes (Goodman, 1986). In addition, while invented spelling reflects children’s linguistic knowledge, their invented spelling may indicate a visual problem (Treiman, 1998).

Children’s invented spellings are not viewed as obstacles in learning, but as an opportunity for the kidwatcher to notice how children are making sense of sound-letter relationships. Likewise, Goodman (1996) views children's miscues in reading as indications of their attempts at using visual, semantic, and syntactic information and integrating this information to make meaning (Sipe, 2001).

Invented spelling shows students’ level of phonemic awareness. It shows what strategies and decisions they made to invent. Invented spelling also reflects children’s knowledge of sounds-letters relationships, and how they practice applying the alphabetic principle acquired through phonemic awareness (Gentry, 1987). Students’ invented spelling shows knowledge of phonics, knowledge of spelling patterns, generalizations and rules, problem solving ability, willingness to take risks, ability to distinguish homographs and homophones, word work, and rules. Looking at students’ writing shows teachers the students’ level of development and their control over the written language. In addition, it reveals children’s knowledge of written language, how it works, use of punctuations, writing patterns and genres, print direction, etc.
Frank Smith has an interesting comment that some misspellings occur not because we cannot remember the right spelling, but because we cannot forget the wrong one especially with homophones (Wilde, 1997).

Invented spelling shows the possibility of a disability. Hearing and Speech disabilities can be detected from children’s writing. It shows also what sounds are repeatedly problematic for children who always have the same misspellings.

Invented spelling does not indicate that the writers are lazy, do not care about their work, or are failures in schools. Actually, invented spelling shows us how good and inventive students are. It indicates how confident they are to make the decision of inventing by applying their own rules while incompetent or non-inventive spellers would rather choose easy short non-problematic words in their writing.

Invented spelling shows us another side of children’s personality: that they are willing to take risks. It indicates that children are thinking independently and analytically about the sounds of words and making sense of the logic of spelling. (Burns et al., 1999)

In addition, Invented spelling shows teachers what dialect the students speak at home. Written language represents all dialects and the effect of dialect on spelling decreases gradually (Wilde, 1992). Treiman (1998) suggests that teachers should take into account the benefit of students’ writing inventions in their teaching of spelling. She added, “Children’s spellings also provide an excellent window into their knowledge of phonology and orthography. Teachers can use children’s spellings to group them for instruction, to predict future progress, and to shed light on any problems that they may be experiencing.” (Treiman, 1998, p. 2)
As children’s writing matures, sometimes they get confused with easy words and misspell them. Sometimes when children know more words, difficult and long words, and learn more language rules, they get more confused. In that case, misspelling does not show us that children are not writers, but it shows that they are trying to find ways to apply rules correctly to make sense out of writing.

Dialect and Spelling

Both student’s and teachers’ dialects can affect spelling performance. When children spell, they primarily rely on their phonetic knowledge and pronunciation. In English, there is no one standard dialect but standards of usages based on grammar (Read, 1986). In Arabic, one standard dialect is in academia and media and not for daily purposes. Children begin speaking by using sounds in their own dialect (Read, 1985). When reading, teachers from different regions than students can produce different sounds that may alter the meaning or disturb students’ comprehension. In that event, language teachers need to adhere to standard Arabic in speaking and dictating to avoid disturbance. Chomsky and Halle (1986) argued that children’s spelling inventions reflect lexical forms used in their daily life. Wilde suggests that “writing focuses to some extent on the visual as it changes from scribble to letters, but there are also attempts to use writing as a way of transcribing sounds” (Wilde, 1992, p. 21). Beginner writers rely heavily on their phonological and phonetic knowledge of language. Standard Arabic for instance, would be on an abstract level for young children because they did not practice to draw from that level yet. Chomsky and Halle suggest exposing children to written materials where they
can see words of that abstract level in use. In addition, they stated that language
development might be accelerated by the exposition of reading and writing materials.

Some researchers believe that dialect and spelling are highly related in that Stever
(1980) called children “dialect spellers”. The dialect-spelling relationship is not simple
though. Goodman and Goodman (2005) believe that even though dialect influences
spelling, it is not as huge an influence as someone would imagine. There are plethora of
studies of how dialect, or even social status, is related to spelling. Sullivan (1971) found
that spelling is highly influenced by the writer’s dialect. O’Neal and Trabasso (1975)
found that dialect influences only young writers and that influence seems to disappear by
fifth or sixth grade according to Graham and Rudorf (1970). The following year, O’Neal
and Trabasso (1975) found that dialect influences spelling when it comes to new or
unfamiliar words. In researching the dialect-spelling relationship, I found that beginner
writers depend on their phonological information, regardless of their dialect. As writers
mature, they start to use visual and orthographic information as well. To conclude,
although studies about spelling-pronunciation relationships are arguable in many studies,
there is an actual influence of pronunciation on young children’s spelling performance
(Read, 1986).

In Arabic, colloquial Arabic dialect shows great diversity from region to region
and among different layers of populations. There are two main classes of Arabic dialects:
the Eastern dialects of Egypt, Sudan, and the Middle East, and the Western dialects of
North Africa. These dialect classes are distinguished by the reduction of the vowel
system in the Eastern dialects and a contrast in the stress system. The dialect classes can
be further broken down into Gulf, Levantine, Egyptian/Sudanese, and Maghrebi (Moroccan) dialect groups. These variations can be found within the same country as well. For instance, in each of the seven emirates of the UAE, there are slight dialect variations. All the Arabic dialects differ considerably from the written language in vocabulary, grammar, syntax, and phonemes, such as the uvular stop qaf, the palatal fricative jîm, and the interdental fricatives thâ’ and dhâl (Watson, 2002). Standard Arabic is the connecting link between the classical Arabic and the colloquial Arabic. Standard Arabic is the shared written language and can be understood by all Arabic speakers.

Invented Spelling versus Traditional Spelling in Education

Teaching spelling should not be a purpose in itself. Spelling is functional and has no meaning if isolated from a meaningful text. Teaching spelling out of its meaningful functional use is changing “language into non-language” (Goodman, 1986). For example, Patty, a first grader, wrote two pieces, one when she was in kindergarten and the second one in first grade when she was obliged to use standard spelling. At age 5, when Patty was still in kindergarten, the teacher asked her class to write a story creatively and expressively. The following is Patty’s original piece and its translation:

Table 2.1: Patty’s Spelling Inventions

<table>
<thead>
<tr>
<th>Original Text</th>
<th>Translation</th>
</tr>
</thead>
<tbody>
<tr>
<td>wnsupatn</td>
<td>One upon a time</td>
</tr>
<tr>
<td>thr ws a ltl grl</td>
<td>there was a little girl</td>
</tr>
<tr>
<td>hos nm ws Jan</td>
<td>Whose name was Jan</td>
</tr>
</tbody>
</table>
Jan was absolutely a beautiful person one day Jan said I am so bored that I am going out in the world to find some adventure. I think I’m going in space to catch meteor so Jan found a star beam and went high in outer space. If you want to know more about Jan’s adventures read the next chapter in my book.

When Patty was 6, she was obliged to use standard spelling in writing and this was her piece:
“The cat

The cat is a pet.

Patty”

Then she crossed the whole page and said, “This is not a story” (Cramer, 1998). Children as young as Patty’s age are aware of the purpose of writing in denoting meaning and conveying a message. Patty was so comfortable writing creatively when she was in kindergarten, that at that young age, Patty was confident to use words like space, meteor, adventures, and absolutely. Patty was able to use the words that expressed her ideas without fearing of spelling the words wrong. At 6, Patty’s piece was clearly not creative and did not have a message. She spelled all the words correctly but that was not enough to make her piece appealing to her and so she crossed off the whole page. Because Patty was not encouraged to use invented spelling in first grade, she did not have a sufficient writing vocabulary that could help her write a story that she liked. As seen in Patty’s example, sticking to “correct” spelling limits children’s’ writing and thinking creativity.

Rich research is found about the importance of invented spelling in promoting reading, writing, and spelling development. For instance, Clarke (1988) studied two groups of first graders who were at the same reading level but one group was encouraged to use invented spelling versus traditional spelling for the second group. The research showed that students of the first group who were encouraged to use invented spelling possessed a distinctive spelling and phonetic analysis over the children of the other group. The researcher found that the first group of children was moving progressively toward standard spelling. Moreover, the research demonstrated that even low-achieving
children were apparently improving by using invented spelling. Clarke (1988) suggested that children who were encouraged to use invented spelling earlier have an earlier shift from visual to phonetic processing of words.

Healy (1991) also studied first graders who were encouraged to write regardless of their spelling accuracy. The researcher found that these children produced more quality and quantity writings compared to children who used traditional spelling only. Invented spelling was found beneficial for children even in a high word frequency spelling program. Garcia (1979) found a steady progress in word attack skills and vocabulary knowledge in students who were encouraged to produce invented spelling. Garcia also found that there was a big influence on writing from invented spelling. Children who were encouraged to invent wrote longer pieces, used T-units exceedingly, and wrote words that were classified above first-grade level according to these spelling programs (Cramer, 1998).

Chomsky (1979) stated that many children know that the way they spell was different from what the community call conventional. Research had shown that invented spelling did not lead to poor spelling; in contrast, as explained previously, it promoted spelling ability and development. Writing in a way that students offered their best spelling produced faster and better writing than waiting until the child had acquired spelling skills (Cramer, 1998). Invented spelling does not confuse writers regarding standard spelling. Even though invented spelling is important to student’s writing, reading, and spelling development, teachers should embrace standard spelling because it matters. Children also should know that even if they have invented spelling as an outlet,
standard spelling is important but they do not have to acquire it instantly because the development pace should be respected.

Studies about invented spelling suggested the following:

1- There is no study or research that showed any negative influence as a result of invented spelling on future spelling, reading and writing development.

2- Children who often practiced invented spelling spell better than their counterparts who practiced traditional spelling only.

3- Children who practiced invented spelling read better than their counterparts in traditional spelling regimens.

4- Children who practiced invented spelling write better and longer pieces than their counterparts who practiced traditional spelling. Cramer (1998) was not surprised about this fact since the aim of invented spelling is to help children write and express themselves.

Invented Spelling in Education: Focus on the Arabic World

Understanding that invented spelling is crucial and strengthens rather than obstructs a child’s development may ease educators’ anxiety about “correct” spelling. Barchers (1994) suggests that students who were allowed to invent spelling become involved in a discovery process. According to Goodman (1986), children would never write or discover the importance of spelling if they have to wait until they control conventional spelling. Teachers are often caught between two concepts: one that invites freedom to write and express one’s self regardless of conventional spelling and checking all the misspellings and having them corrected (Buchanan et al., 1984). In this section of
the study, I will deal with different approaches to teaching spelling. Dictation will be discussed and explained in depth since it is not a part of American education.

**Teaching Spelling**

Spelling is a writing skill frequently found in final draft writing (Sipe, 2001). Spelling is not taught by the exposure to reading and writing; it is learned from reading, writing and direct spelling instruction (Gentry, 1999). Spelling is not only a reflection of children’s knowledge of specific words, but it is an indication of understanding that the language system is made up of complex and different patterns (Wilde, 1992). Children learn through hypothesizing and testing their knowledge. In that event, learning to spell is best established “when the same cognitive processes of hypothesizing and testing are permitted to function, as children write for their own purposes” (Buchanan et al., 1984, p. 108). In the cognitive learning theory, the learner uses the information he already has, what he believes to be true to predict, confirm, and relate new information to the old.

Wilde (1992) claims that there is no reason to put children in a phonemic awareness program because other informal activities and games are adequate. Chomsky (1971) suggests that children’s instruction should focus on phonemic relationships when they spell and their spelling problems will gradually be solved because they will develop the sense of letters and sounds construction.

Understanding when a student writing has a purpose and audience, it stimulates the transition from invention to convention. Spelling, in my point of view, should not be taught in isolation. It should be integrated in reading, writing, playing and other
classroom activities. In Spel... is a Four-Letter Word, Gentry (1994) stated four important issues teachers should be aware of when teaching spelling:

1. Learning to spell is a natural developmental process: conventional spelling is important and students should be encouraged to use it gradually. Children need time to “explore and experiment with language. They will gradually incorporate correct spelling into their repertoire of written words as they learn more complex words and understand the importance of revision” (Barchers, 1994, p. 287)

2. Learning to spell does not depend on memorization; yet, it is a conceptual process. Students should be encouraged to use purposeful writing.

3. Spelling should be taught in integration with other language arts. “Teachers who foster a collaborative learning atmosphere also nourish a social context that allows students to tap each others as spelling resources” (Barchers, 1994, p. 308). Kamii and Marie Randazzo’s (1985) research shows that “group spelling” has distinctive results in students’ spelling. In this research spelling was taught socially and in collaboration with other students. Students played the role of evaluating each others’ spelling, punctuation, grammar, etc. (Barchers, 1994)

4. Spelling instruction should focus on teaching through context rather than tests and tedious materials and lists. Spelling instruction should also understand and respect a child’s development and orthographic knowledge.

Some children are good at perceiving spellings from reading. Wilde (1997) suggests that writers will learn the spellings of many words through reading (Wilde, 1997). Wilde explains that using visual information comes naturally to some people but
not others. Teachers should not treat children's brains as cameras. We cannot teach spelling by making children take pictures of words with the intention that their mental images are clear and precise. Rather, each student's brain is an "exquisitely designed pattern detector, but it depends on adequate information to work efficiently" (Bear & Templeton, 1998, p. 222). According to Gentry, making phonetic, semantic, etymological, and visual associations are necessary demands learning to spell.

Spelling can be improved by learning some strategies and not by pushing students to spell every word correctly. Wilde suggests developmental uses of spelling strategies. Young children first use placeholders or invent word phonetically; then, they use knowledge of spelling patterns and/or meaning. After that, they use adult strategies, try variations, ask someone or use resources. Some people are good at memorizing words. Teachers should not intervene with students’ spelling inventions and development by correcting every word and immediately giving them the right answers. Otherwise, they will develop dependency on the teacher, which will result in the delay of the students’ own development. Minilessons, for example, can serve as a tool to teach students or guide them to the rules through individualized instructions that respond to students’ needs.

Graphophonic knowledge is also important. If children depend only on word sounds, it can cause confusion. Graphophonic can help children remember the correct spelling (Wilde, 1997). Spelling does not depend on memorizing the spelling of words; spelling demands an understanding of phoneme-grapheme relationships, morphemic relationships, and the semantic and syntactic influences upon words (Gentry, 1993).
Children will begin to use words they often see in their reading. In that case, writing and reading will work to reinforce each other (Wilde, 1992). Mustafa (1997) agrees that sounding out is not the right way of teaching children spelling and suggests guiding students’ visual memory by asking them questions, such as “Can you remember what it looks like, can you remember seeing that word somewhere? Etc” (Mustafa, 1997). Gentry (1997) stated that the ability of word visualization is the hallmark of the skilled speller. Nelson (1990) discovered that early phonics instruction stimulates children’s development of correct short vowel spelling (Cunningham & Cunningham, 1992).

Barchers (1994) believes that conventional spelling could be taught through revisions. Yet, not all the writing pieces need to be revised. Invented spelling helps students to get their ideas down on paper.

Teaching Spelling In the Arab World

Generally, in the Arab world and especially in the UAE, low primary grade teachers teach all the subjects, including language. From the fourth grade on, each subject has its own teacher. Most of the elementary grades have four books for language, two for each semester: one for reading and the other for grammar. From both books, students learn reading, grammar, spelling, composition, and handwriting. The books are readable and full of illustrations and colors. These books are designed by a special council in the Ministry of Education and revised by specialists and university professors.

The language teacher needs 164 credit hours at the university, which are divided among Language Arts, Educational Foundations, and General Foundation classes. For a year, while studying, all teachers need to attend schools and teach. Arabic Literature
Specialist students can also teach the language by taking an additional year of education at the university or additional courses in education after graduating. Most teachers feel lost when they first start teaching because the education they received did not focus enough on practical preparation.

Teaching Dictation in the UAE Elementary Public Schools

In first and second grade, spelling is taught through dictating sentences chosen from students’ reading book. Later, students are dictated longer paragraphs and passages they have already studied or some that are new. Generally, there are three kinds of dictation:

1- Transferred Dictation (الإملاء المنقول): In this lesson, students read, pronounce, and understand the text or a sentence, and then write it down. This kind of dictation is suitable for young students until fourth grade. The aim of this kind of dictation for the student is to learn imitating and notation of different writing patterns.

Educators in the Arab world believe that writing is highly related to reading; therefore, dictation, writing, and reading activities are taught simultaneously.

Transferred dictation is given by following these steps:

a- While the students follow the reading in the books or on the blackboard, the teacher reads the passage, explains it, and then asks some questions.

b- Some students read the passage.

c- The teacher then explains the pattern of the new spelling word turning students’ attention to the word’s orthography.
d- The teacher points to the text and reads the text while the students listen, watch, and write carefully. After that, the teacher repeats the text to assure that all the students understand the whole text written.

e- At the end of the class, the teacher collects students’ spelling sheets or books and corrects them.

Because students can see the text and imitate the words or transfer them to their books, transfer dictation helps students to read, spell, imitate, and it turns their attention to the sound-letter relationship. By this kind of spelling lesson, students also learn to improve their calligraphy skills and to keep their papers neat and tidy. In addition, students at this age practice writing the date and title.

2- Perspective Dictation (الإملاة المنظور): In this lesson, students in fourth grade study the text, remember it, and get ready to be dictated. The steps to this kind of dictation are similar to the previous one except that after discussing the text and studying the different writing patterns, students close their books, listen to the text, and write it down. In addition to teaching children to spell, the aim of this dictation is training the memory to store a bigger capacity of new and difficult words spelled correctly, stimulate the knowledge of the sound-letter coordination, and help students to write.

3- Traditional (heard) Dictation (الإملاة الاستماعي): This dictation is suitable for students from fifth grade on. Traditional dictation is given following these steps:

a- The teacher introduces the text, reads it, and then discusses it with the students.
b- The teacher chooses some words to be written on the blackboard and explains their orthography. The teacher then asks the students to provide examples of these words in full sentences and write them on the board.

c- Next, the teacher explains similar writing patterns and new spelling rules.

d- The teacher cleans the blackboard and asks the students to get prepared for dictation. The teacher then rereads the text while the students listen and write simultaneously. New texts that have the same spelling rules are also provided. The teacher then collects the papers for evaluation. Evaluation techniques will be discussed later in this paper. The aim of this dictation is to teach students to spell, write in paragraphs, and to pay attention to punctuation. Students also are asked to sit appropriately, have a neat calligraphy, and maintain a tidy paper.

4- Dictating for the Test (الإملاء الاختباري): This lesson is similar to traditional spelling, previously explained, except that spelling rules are not revisited or explained. In all the previous dictations, for evaluation, the teacher looks at conventional spelling, tidiness, clear calligraphy, date and title. For elementary students, the teacher looks at diacritical marks that are replaced by punctuation marks for older students.

Evaluating Spelling

Fairness is the foremost goal to consider when evaluating spelling. “Children have different abilities and grow at different rates, in every area. Children are different in the amount of time and effort they dedicate to learning (Wilde, 1992). When marking students’ papers, the teacher must remember that every mark students make is an action
toward convention (Smith, 1982). Many teachers believe that some students are good writers because they spell every word conventionally. “Spelling does matter” as Graves (1993) said, but it is part of a bigger process. From Goodman’s point of view cited in (Wilde, 1992), giving the child a spelling report card is like giving a grade for multiplication.

There are different ways to grade students’ writing based on different perspectives and interpretation of what the grade means. Criterion-referenced grading is the famous form of grading where the students’ work is evaluated based on how well he has mastered what. This criterion is widely used in UAE schools. Another form of grading is student centered, which provides grades based on student’s achievement and learning progress. In this system, all the students may get A’s even though they have achieved in a different way (Wilde, 1998).

Wilde (1997) invented the “One second words” to explain that some misspellings just need a final one second look to be corrected. In addition, Wilde (1992) suggested keeping a portfolio of a students’ writing. This can serve as a resource to track students’ writing improvement and a “quality record of growth.”

It is pointless, in my opinion, to give students a spelling list test when they use the same words in context in their writing. Students’ writing shows more than the test does. Wilde (1992) suggested evaluating students according to how much they have learned, grown, or participated rather than the regular classroom comparison.
Buchanan (1989) stated that a spelling evaluation should include the child’s use of
dictionaries and other resources, the child’s view of himself as a speller, and the
willingness to take risks in trying and editing words.

Evaluating Students’ Dictation Pieces

There are several ways to evaluate students’ papers in the Arab world. In Dictation and
Punctuations in Arabic Writing, Ibrahim (n.d.) listed four evaluation techniques:

1- Spelling mini-lessons: The teacher works with each student individually and
evaluates his/her paper. Meanwhile the students are kept busy doing some writing
or reading activities. This is the most beneficial way but it is time consuming.

2- The teacher takes students papers or spelling books to be evaluated outside the
classroom. The teacher marks the students’ areas of weakness in one color and
spelling problems in a different color (usually red).

3- The teacher demonstrates the text on the board again and asks all the students to
correct their spelling mistakes. This technique teaches students to be responsible,
and it lessens the embarrassment of too many spelling mistakes.

4- The teacher asks the students to evaluate each other’s papers and distributes them
randomly. (In both techniques, 3 and 4 the teacher must reevaluate the papers).
Teaching Composition in the UAE Elementary Public Schools

There are three kinds of writing activities assigned by the Ministry of Education in UAE public schools and most Arabic countries. These activities are: dictation, as explained previously, handwriting where students practice two kinds of Arabic fonts: Alroqaa, and Alnaskh, and composition, which is explained in this section of the research.

Composition is translated literally in Arabic as written expressions. There are two categories of expressions students practice in public schools: oral where students express their thoughts and ideas orally and written, which is called composition. Standard Arabic is the only form of language accepted in writing, reading, and speaking in the Arabic language classroom. Since this study focuses in invented spelling, I will focus on written expressions (composition) only. There are two kinds of compositions students should practice:

1. **Formal (purposeful) composition**: where students practice writing formal letters, reports, faxes, forms, etc. Since this kind of composition is formal; it cannot be considered an outlet for students’ feeling and empathy. The language of this composition is academic.

2. **Creative composition**: where students express their feelings and ideas by writing stories, poems, and journals.

Generally, teaching composition in elementary schools is designed to suit students’ development and writing needs. According to Rajab (1995), in the Arab world, teaching composition aims to encourage students to express themselves and their ideas as
they learn about language and sentence structure. Students practice different kinds of writing according to their needs and be encouraged to view writing as an outlet. Students from first to third grade are given different kinds of composition tasks, such as writing a summary, picture titles, thank you or welcome notes, letters, journals, completing a story, organizing story sentences and writing simple reports about field trips, animals, etc. For older students in elementary cycle, students practice previous activities extensively and more independently.

The Procedure of Teaching Composition

Teaching composition usually follows an oral discussion about a specific topic provided by the UAE Ministry of Education. The language teacher starts the composition class by a brief discussion with students about the topic. Composition class may also follow a brief explanation of a new spelling rule. After the explanation, the teacher writes the topic and its heading on the board and reads it aloud to the students. Then, students copy what the teacher wrote in their notebooks and start writing. From an early age, the teacher assures that the students cover all the topic headings, stick to standard Arabic, maintain neat handwriting and clean notebooks, and use additional information to support their ideas. Students usually spend no more than 35 minutes writing and editing their composition, which is limited by a certain length or a certain number of words. Finally, students place their notebooks on the teachers’ desk. There is no specific way or rubric to evaluate students’ compositions. Even though the Ministry of Education has issued guidelines to evaluate students’ pieces, every teacher has his/her way to evaluate.
Compositions may be corrected by a peer for additional practice. Moreover, teachers may assign a certain letter for each kind of spelling invention like (p) for punctuation mark or (s) for syntax. Students write compositions in their composition notebooks regularly except for the semester tests for which they are provided with composition test sheets with the title and headings already written on them. Composition class is part of the Arabic language curriculum and taught by the Arabic language teacher. Composition class is assigned once a week. The composition class time includes a brief discussion of the topic, writing and editing, and sometimes evaluation for the total duration of the 45 minutes.

For grading and test purposes, teachers may calculate the average grade of semester compositions, or inform students that what they are writing will be counted as their test grade. Students may be handed empty sheets with the composition topic for a test as well. The grading and testing criteria must be clear for both the teacher and the student according to the Sixth Grade Language Teachers’ Guide to Teach Arabic Language and Grammar (2001). See figure 1 for an example of a composition written by a fifth grade boy about the holy month of Ramadan. The following sample is not part of this study.
Figure 2.1: Example of a Fifth Grade Composition
Previous Studies about Invented Spelling in Different Languages

Although some consonants and the same vowels may appear in more than one language, it is never the case that there are two identical languages. Some languages may function like other languages but both of them are different in vowel-consonant relationships (Read, 1986). It is important to study invented spelling in different languages because studying invented spelling in different languages allows testing of early literacy theories and takes the results further against non-alphabetical languages. This kind of study is important because it demonstrate how language perception is viewed in relation to reading and writing in different cultures. Moreover, it is interesting to study other educational systems in teaching and correcting spelling in different cultures and its affect on children’s spelling development.

Invented Spelling in English

“The English spelling system is the butt of many jokes. How irregular it is, we complain, how illogical! How can children ever be expected to master such a system except through brute force memorization?” (Treiman, 1998, p.3)

Charles Read (1975) considers spelling to be a psycholinguistic performance and to be understood in terms of linguistic and cognitive concepts. Read suggests that preschool children sense relations among phonemes and no longer view them as discrete objects in their phonological space. As Read pointed out, by the age of five, children spelling is more closely to phonetics because of their limited knowledge of phonological and morphological structure. Previous researches, unlike the new ones, focus on spelling
“errors”. For Read, standard spelling evoked how children arrived at that stage and how nonstandard spellings developed at different rates and frequencies.

When learning to spell, children tie together their knowledge about characters and their corresponding speech sound. In Read’s (1975) study, he found that preschoolers and first graders tended to omit pre-consonantal nasals but preserved nasals in syllable initial and final positions. For instance, children at that age wrote plat and agre for plant and angry. In another study, Read (1986) found that Dutch second graders were similar to English counterparts, spelling disyllabic words with nasals only 30% of the time.

Beers, Beers and Grant (1977) studied primary school children and found that they create spellings such as gait for gate because the vowel is a diphthong. Later on, children learn to represent long vowels with digraphs. However, for the researchers, studying children’s spelling “errors” does not provide adequate information about why children create such spellings. Researchers also relate their findings to research on reading that was conducted by Goodman and Goodman and which showed reading and writing has distinguishing bases for “miscues”.

Fisher (1973) studied 75 first graders. She put the children into three groups. Then, she classified spelling “errors” as belonging in three categories: name vs. non-name vowels, voiced vs. voiceless consonants, and substitutions vs. omissions. In the study, Fisher looked at differences in the frequency of substitutions and omissions across student groups. Based on her study results, she agreed with Read (1971) that both name and non-name vowels fit predictions. In addition, Fisher found that children used A for
/ɛ/ more often than they used A for a lax vowel while E was used more for /ɪ/ in non-standard spelling.

One year later, Gerritz (1974) examined first graders, focusing on invented spelling. Gerritz collected written journals of 12 first graders in her classroom throughout the school year. As a teacher, Gerritz was able to “kidwatch” students and monitor their development in reading and writing through instruction. Gerritz also observed the effect of extensive writing events and its reflection on non-standard spelling. Gerritz found that children pair tense and lax vowels, write in standard spelling more than preschoolers do, and base their spelling on the components of the vowels (Read, 1986).

Read (1986) and Gerritz (1974) reached the same conclusions after examining different children in different times. They both found that:

a. Children pair the tense and lax forms of the front vowels, which mean students understood the relationship between the components that each member of the pair shares. In addition, Read (1986) found that some children preserved pairing even after learning to read.

b. Children were able to see front vowels distinctively from all the other vowels.

c. Children used W and Y to represent the off-glide in diphthongs, which means that they were aware of the existence and the absence of the glides.

At the University of Virginia, Edmund Henderson supervised many dissertations that focused on invented spelling. Building on the accumulations of these results, Henderson and Beers (1980) were able to generate a larger study on creative spelling. Beers’ (1974) dissertation put the spelling development in four stages based on research
on first and second graders in Charlottesville, Virginia: Omission of vowel, letter-name, transitional, and correct form. While Gentry’s (1977) dissertation modified the previous sequence and originated five stages of development:

A- **Deviant**: Children’s writing is considered immature (e.g. MENENA).

B- **Pre-phonetic**: Children’s writing involves omissions of vowels (e.g. TP for Type).

C- **Phonetic**: Letter-name or tense pair (e.g. TIP for Type).

D- **Transitional**: Children may invent a segment of the word with a possibility of standard spelling (e.g. monostor for monster), reverse standard spelling (e.g. taod for toad), or write only one segment of the word conventionally (e.g. unitted for united).

E- **Correct** (Read, 1986).

The transitional stages of both Gentry (1977) and Beers (1977) show the power of invented spelling and they demonstrate children’s shift toward equilibrium. The study shows what children tend to believe to be a standard spelling without being standard. Moreover, both studies show the stages of spelling development and progress. For both researchers, the phonetic stage occurs in the primary grades and children outgrow this stage. In addition, they found that first graders spelling development is greater than second graders, which produce more transitional and standard kind of spelling (Read, 1986).

Treiman (1982) not only studied children’s and adults’ spelling, but also studied pronunciation of the stop after initial /s/ (e.g. spy, sky). Treiman found that adults were more influenced by standard spelling in that they were barely aware that the stop in “spy”
is more in “buy” than that in “pie.” Regarding young writers, Treiman found that first and second graders, who are less familiar with standard spelling and still learning to read, are able to produce standard spelling, are accurate on control items, and competent on a “pretest of spelling stops initially, where the voiceless ones contrast with the voiced ones in both voicing and aspiration” (Read, 1986, p. 57). Treiman’s findings prove that children at the beginning of writing are at the phonetic level and they then move toward standard spelling (Read, 1986).

Ten years later, Treiman (1998) began examining miscues in spelling. Treiman wanted to study the origin of spelling errors by dividing the spoken words into smaller units bearing in mind their order, and then designating a grapheme for each unit. Based on that analysis, Treiman looked at student’s orthographic knowledge and the effect of reading skills improvement on that knowledge. Her research concluded that both writers and readers map speech to print.

Barron (1985) proposed that poor readers tend to write more phonetically when it comes to spelling words, such as dept, sword, and yacht. When these special words were dictated to fifth and sixth graders, poor readers had more phonetic accuracy errors and produced errors, such as yot and det, while good readers relied more on visual and phonological information (Read, 1986).

Invented Spelling in German

In Standard German orthography, vowels plus nasals and liquids are written with two characters: one symbol represents the vowel and the other represents the consonant.
According to Read, 1986, Wimmer and Landerl (1997) studied 2nd, 3rd, and 4th graders in Germany to test the students’ knowledge of vowels. In their study, the researchers deliberately omitted the vowel(s) from 29 words. The students then were asked to insert the missing letter(s) after hearing the words pronounced. The major finding was that the missing vowel(s) were replaced by another vowel, usually ones that were mapped on to the same phoneme in print.

Also in 1997, Wimmer and Landerl examined a group of 68 Austrian 1st graders. In this study, the students were given 25 sentences that had some missing words. After hearing the sentences, the students were asked to fill in the blanks. The researchers found many of the consonant substitution and deletions had a phonological justification. That study invited the discussion of dialect effect on spelling because of the Austrian-German dialect. For example, wind and sparen [save] were written as wint, and sbaren, because, in such dialect certain sounds, such as b/p, and d/t are more or less the same. This study also verified the findings of the previous study in that the substituted letters represent other letters that are mapped on to an identical sound. For instance, in the word Baume [trees] the au was substituted by eu, and in Schnee [snow] the ee was substituted by eh. To conclude, invented spelling found in young German writers represented their knowledge of their language phonology and the invented words sounded in practice the same as the target words (Read, 1986).

Invented Spelling in Dutch

Bosman and Van Orden conducted a study on Dutch children for ten months. They found that spelling children’s spelling improved if they read the words at least 9
times and use them in some activities. When they read the same book or word 6 times or less it did not word does not improve their spelling. The researchers’ results support other research that reading does not always transfer to spelling.

Niski (1987) worked with 255 children from first and second grade in Zutphen. These children speak different dialects because they come from different parts of the Netherlands. Although Weijnen (1966) indicated no dialect differences, Niski (1987) conducted a study to examine dialect differences of “bet” and “bent” in Dutch phonological counterparts. Van Rijnsoever (1979) also conducted a study with first graders. Both researchers found omissions of preconsonantal nasals in Dutch. Niski also found about 75 percent of first grade students self-corrected the nasal segment in a vowel-nasal stop sequence and inserted what was previously omitted. According to Rijnsoever’s findings, the omissions occurred based on phonological context and were more frequent in first grade. In addition, the Dutch studies pointed to the importance of a researcher being alert to individual differences in literacy development (Read, 1986).

Invented Spelling in French

Gill (1980) conducted a study in French Montreal with 108 children from first to fourth grade. He observed the dictation of the fourth nasalized vowels of French (Read, 1986). Pronunciation of these vowels varied depending on the dialect of the dictator. Gill’s study demonstrates how spelling patterns differ based on each language’s phonological system. Gill’s study also pointed to the importance of the role of speech sounds in the phonological system, not in isolation because beginning spellers segment and categorize speech sounds. Read (1986) suggested that the letter-name spelling was
stronger in English than in French because of the primary teaching of letter-name spellings.

Invented Spelling in Spanish

Rich data and research was found about invented spelling in Spanish and Latin American countries. Invented Spelling in Spanish was studied thoroughly related to reading and writing development and bilingualism (e.g., Diaz & Ferreiro, 1998; Ferreiro & Teberosky, 1979; Gonzalez, 1999; Signorini, 1997).

An important study by Vernon and Ferreiro (1999) focused on phonemic awareness related to writing and reading development. Their study suggested the importance of nurturing phonemic awareness with learning to read and write. In their research, they found a high correlation between the ability to benefit from systematic phonics/phonemic awareness instruction and the child’s level of writing development. They concluded that children invent their writing based on their segmentation of spoken words regardless of their age. In addition, the researchers declared that “phonemic and phonological awareness are not pre-requisites to reading, but are integral components of the reading process” (Escamilla, 2000, p. 269).

Another study by Signorini (1997) dealt with the influence of reading instruction on invented spelling. The study suggested that primer students are influenced by learning syllabic units while older children tend to decode the unit of the phoneme. She reported that children’s phonemic awareness was highly depending on reading instruction.

Invented spelling in Spanish was also related to the influence of learning English in Nathenson-Mejía’s (1992) study. The researcher found that invented spelling in
Spanish demonstrates the influence from other languages such as English (Edelsky & Jilbert, 1985; Nathenson-Mejia, 1989). The researcher suggested that students should become aware of that influence and learn to control their spelling. In her research, Nathenson-Mejia showed how teachers can identify students’ strengths and how to make instructional decisions based on those needs, using the students’ written pieces. The researcher studied a group of third graders that demonstrated what each writer could do. For instance, she studied a sample of a Spanish girl in third grade who wrote a piece about the snow and she pulled out some areas of strengths some teachers may not be aware of (Nathenson-Mejia, 1992).

Escamilla and Coady (1998) studied writing samples in Spanish, collected from 409 students in a K-5 elementary school bilingual program. The researchers found that young students use vowels before consonants, and produced invented spelling in Spanish earlier than English speakers produce. They found also that retention of invented spelling for primary and intermediate Spanish speakers remained longer than for English speakers. Interestingly, English writing rubrics are found futile in providing help to Spanish writers. Moreover, the researchers suggested development is the reason writing impacts on grade or state assessments (Escamilla, 2000).

Mora (1992) was also interested in Spanish bilingual students, especially Spanish-English speakers. In her research, she studied the transfer of knowledge between these two languages in writing. She investigated the validity and importance of writing instruction in the second language to determine if students apply their knowledge of first language writing instructions to the second language. The researcher found that it is
important for children to base their writing concepts and spelling on a language that is familiar to them to be able to deal with writing obstacles, such as spelling problems (Read, 1986).

Studies of invented spelling in Spanish invite discussion of invented spelling and bilingualism. Being a bilingual for instance is not like having two monolinguals in one mind in that their linguistic behaviors should not be compared to monolinguals of each language (Grosjean, 1989). Grosjean studied Spanish bilinguals and found that Spanish/English speakers have linguistic repertoires that are different from those who are monolinguals in Spanish or English. Grosjean explained that bilinguals have the ability to access both languages in many situations and can adopt problem-solving strategies from the knowledge of the second language (Escamilla, 2000).

Invented Spelling in Hebrew

Hebrew was considered a dead language until the 1900’s. Children in Israel started learning a language that was not spoken at home or was not taught to their parents in schools (Feitelson, 1980). I found only one study about invented spelling in Hebrew in an unpublished doctoral dissertation. David Schwarzer worked for ten months with Noa, 6 years old girl. The data was collected by written artifacts in three languages (English, Hebrew, and Spanish), anecdotal records, informal interviews with Noa, formal interviews with Noa’s teachers, and videotapes. Schwarzer’s study was based on Halliday’s ideas of language acquisition of learning about language and learning through language. The researcher’s work with Noa raised many issues like multiliteracy development, convention versus invention, and tension between school and home. He
also discussed exposing children to “Genres of power” suggested by Martin (1991). The researcher’s study was not targeted to study invented spelling, but writing development for a certain child in three languages.

Invented Spelling in Farsi

Mirzaei (2002) conducted the first research on invented spelling in Farsi. In her dissertation at University of Southern California, she focused on both monolingual and bilingual Persian speakers. Mirzaei investigated students’ invented spelling in different scripts that did not share the same alphabets. The researcher studied three bilingual children in the initial stages of learning writing English and Farsi. Two of these students were fluent orally in Farsi and English, and the third was fluent in Spanish and English. Mirzaei collected samples throughout the school year using students writing tasks and by interviewing Farsi teachers. She found that Farsi children relied heavily on listening when learning Farsi orthography. Students substituted symbols that sounded similar and omitted letters that were either silent in print or were not heard. Students also used their knowledge of spoken Farsi to their writing. Students who were fluent in spoken Farsi had difficulty representing some sounds in writing because they are not found in English. In addition, Mirzaei was able to prove that scripts that share the same alphabets such as Arabic and Farsi also share common spelling inventions based on the same inventions students produced in Farsi and Arabic.
Invented Spelling in Other Languages

Researches were found about invented spelling in other languages. Read et al. (1986), for example, worked with Mandarin speakers who had learned to read in an alphabetic system called pinyin versus those who had not and studied their reading and writing. The procedure and research findings were not available.

Invented spelling in non-alphabetic scripts, such as Japanese, was investigated. Mann (1986) found that Japanese first graders develop phoneme segmentation slowly due to syllabary orthography, rather than alphabetic exposure. His research stated that no matter what writing system children encounter, they ought to learn the units of speech. A problem is it is difficult to understand the phonemic concept underlying the Latin alphabet.

Studies and Researches about Arabic Spelling

Alnashef (1999) studied writing-reading relationship and she scaffold giving the child the choice to learn to write or not in early ages before school. In her book, Alnashef explained that children have to be at mental age of 6 to be able to comprehend the sound-letter relationship, because such an age allowed children to have some understanding of space, letter sequencing, letter sounds and their orthography, and visualization. In addition, Alnashef noted that scribbling is the first “assimilation” to writing, which the child used to denote meaning. However, children may scribble purposelessly.

Abdul-Raheem (cited in Alnashef, 1999) asserted that children write when they feel safe and secure to communicate and share their life through the messages they write.

Abu-Alhaija (2001) on the other hand asserted that writing should be a general
purpose in itself because misspelling can mislead the meaning. “Good” spelling for the author was defined as correct conventional spelling, having the appropriate punctuation marks, and clear readable handwriting. Abu-Alhaija also blamed teachers for student’s misspellings. He wrote; spelling is a critical problem for students and the reason could be the teachers who are not teaching it the right way. In addition, he sees to the nature of the Arabic language as a reason for student misspellings (Abu-Alhaija, 2001).

Awad et al. (1999) noted that the notion of spelling had changed in recent years. Spelling is no longer taught to test the students’ ability to write, but as a way to help them write and make sense of their pieces. For the authors, spelling was studied and explained through dictation where students were given some pieces to read, understand, study, and then write as dictated by the teacher. Teaching spelling and good writing, as the authors mentioned, should be through choosing a meaningful clear text where the student can understand, study, learn orthography, and then be ready to be dictated to. (Awad et al., 1999).

Shehata (1990) believed that good spelling is important to convey the right message. For Shehata, good spelling is important to get a good job and to be successful in life. Shehata supposed that elementary students are not able to have correct spelling, and that is not limited to elementary stage but many college students and even journalists are not able to write without misspellings. The Arabic language is special because of its nature, as Shehata noted, and that nature is the reason behind student’s misspellings. The nature of the language he pointed to in his book was related to diacritical marks,
grammar, orthography, vowels, and some orthography differences between the Holy Koran orthography and standard writing (Shehata, 1990).

Albajja (2002) differentiated misspellings that occurred during dictation and those found in students’ journals. A pronunciation factor can be added to the reasons behind students’ misspellings in dictation.

Quady (cited in Mirzaei, 2002) examined a group of fourth graders’ spelling in Arabic. His study shows that children’s spelling involved the consonants, and the most common type of consonant errors was the substitution of letters that represented the same phoneme in print (e.g. ت/th/ and س/s/). Another study by Ramadan (1982) in Egypt shows two types of systematic errors in a group of primary school children’s writing. The first were sound-based substitution of vowels by vowels, and consonants by consonants. The children noticed short vowels that appeared as diacritics were replaced by similar sound long vowels that appear as letters (e.g., short o by long u/j), and consonants by consonants that mapped on to the same sound (e.g., ذ/dh/ by ج/z/). The second type of errors was visually based, which means replacing letters that look similar.

Invented spelling in Arabic is rarely segregated from dictation in instruction. Almost all the authors judged students writing using their dictated pieces and not their journals or authentic pieces. Most educators in the Arab world suggest that the difficulty of the Arab language is the reason behind students’ misspellings, while some other educators blame inappropriate teaching instructions. Based on research, researchers from the Arabic world had focused on the types of spelling “errors” writers produced rather
than on how these inventions were produced or the metalinguistic orthography
knowledge the writer brought into writing.
CHAPTER 3

INTRODUCTION TO THE ARABIC LANGUAGE

Arabic is one of the world’s major languages. It is spoken on two continents with a total population of 410 million. Arabic belongs to the Semitic family of languages, such as Hebrew (both classical and modern). Its alphabet, with some modifications, is used in other non-Semitic languages, such as Persian, Urdu, and Kurdish. Swahili, Hausa. Other leading African languages used the Arabic alphabet, with modification, beginning about sixty years ago (Awde & Samano, 1987).

Arabic is a difficult language to learn. The word Arabic refers to different forms of the same language:

A- Classical Arabic is the language of Koran, great writers and poets. The written orthography of the Koran is hallowed as the “vehicle of God’s revelation” and therefore cannot be changed (Haywood & Nahmad, 2003, p. 2).

B- Modern standard Arabic (MSA) or the modern literary Arabic is the universal language of the Arabic-speaking world, which is understood by all Arabic speakers. Standard Arabic is the language of written material and of formal TV shows, lectures, etc. Spoken Arabic and literary (standard) Arabic are almost two different concepts.

C- Colloquial Arabic is the spoken language that is used daily. There are over 30 different varieties of colloquial Arabic which include:
- Egyptian: spoken by about 46 million people. The Egyptian dialect is the most widely understood dialect due to the popularity of Egyptian-made films and TV shows.
- Algerian: spoken by about 22 million people in Algeria.
- Moroccan/Maghrebi: spoken in Morocco by about 19.5 million people
- Sudanese: spoken in Sudan by about 19 million people.
- North Levantine - spoken in Lebanon and Syria by about 15 million people.
- Iraqi: spoken by about 14 million people in Iraq, Iran and Syria
- Najdi: spoken in Saudi Arabia, Iraq, Jordan and Syria by about 10 million people.
- Gulf: the spoken dialect of Arabic gulf countries such as Kuwait, United Arab Emirates, Qatar and Oman. (Omniglot, 1998)

Arabic is different from Hebrew and English in that almost every third word (noun, verb, and conjunction) can be a homograph and represents more than one meaning if it is written without didactical marks (unvowelized). Without these marks, readers have to rely on their own experience and previous semantic knowledge. Because the Arabic language, like any Semitic language, is written with consonants and the roots of Arabic words can be homographs, adding vowels to these roots results in new different words (Farayha, 1958).

The Arabic language is a huge system that has multi – systems. It has its own sound system distributed in ideal style; it has its own vowelization, its own syntax, its own
syllable system, its own stress, and its own intonation. In simple way, Arabic language is a complex system and each system performs its function in collaboration with the other systems.

Arabic Scripts

Arabic scripts are cursive and written from right to left. The alphabet (هجاء) consists of 28 consonants letters (29 if Hamza is considered a separate letter). However, three of these letters are used as long vowels or diphthongs, ālif ә, wāw ُ، and yāʾ ی. There are no capital and small letters. The word that starts the sentence and names are written exactly as any other words that are in the middle or are not nouns. Because almost all letters are joined, most letters take different forms. All the letters have a simple basic form whether the letter is isolated, initial, medial, or final as illustrated in figure 1. Some letters have a final hook (dent) added to the basic form as well. Because only six letters preserve their graphic form regardless of their place of occurrence, research shows that these graphic differences cause confusion for young writers and therefore resulted in applying the 22 graphics rules to the other six (Shehata, 1990). Figure 1 below demonstrates the basic forms of the Arabic alphabets when joined (Omniglot, 1998).
Figure 3.1: The Arabic Consonants

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</table>
Graphic Similarity among Some Alphabet Letters

As illustrated in figure 1, many alphabet letters in Arabic share high graphic similarity and the only way to distinguish them is by looking at the location of the dots and the number on that alphabet letter. For example the alphabet letter (jīm, ǧā’, khāʾ, ǧim, ǧāʾ) have exactly the same written form with different dot location, following are some examples of alphabets that share the same graphic similarity: ب ث ن س ش ر د . ف ق ع گ ض ص ط ظ .

Tied Tāʾ and Open Tāʾ:

The (tied tāʾ،، ُ_ُه) “tāʾ marboota” is different than the (open tāʾ،، ُ_ُه)“tāʾ maftooha” even though they are both the same alphabet letter (tāʾ). When paused, open tāʾ is vocalized “at” while tied tāʾ is vocalized “ah” (Haywood & Nahmad, 2003).

Open tāʾ in Arabic language can be found at the end of verbs, nouns, or particles as the following:

A- At the end of the verb:

- Open tāʾ as an original letter at the end of some verbs as in (sakata: سكث: to be silent).
- Attached to the masculine past verb to make it feminine as in (namāt: نمامث: she slept), which implies that all feminine past verbs ends with open tāʾ،، ُ_ُه.
- Attached to a nominative vowelled pronoun as in (nemṭo: نمثث: I slept) and (nemṭa: نمثث: you slept).
B- **At the end of a noun:** if the letter before the “تُّ” is not vowelled (have sukūn). For instance, in these words open تُّ is written instead of tied تُ’ because they follow a non vowelled letter: (بنت: بُنت: girl), (يافون: يافَون: ruby), and (مسلمات: مسلمات: female Muslims)

C- **At the end of these three particles:** (لَا، رَبّ، ثُمَت). **Tied تُّ and هَّ:**

A ninth grade student that I taught wrote about her country: “the nation should be for the patriot, his soul and life” where she meant to write "الوطن يجب أن يكون للمواطن روحاً ووطنية”. This example shows another kind of confusion between the (tied تُ’ ) that looks graphically similar to the alphabet (هَ) when it occurs at the end of the word وطن. When paused at the end of the word, tied تُ’ would be vocalized as “ah” which is the same sound of the letter هَ at the end of the word. The only graphic differences are the two dots found in the (tied تُ’). The critical semantic difference is that the وطن is used to indicate a single masculine pronoun while the (tied تُ’ وطن) indicates a noun.

**Dents**

One of the most problematic issues in the Arabic alphabets’ graphic is writing the dent (hook) of ten alphabet letters: (ب، ت، ث، ن، ي، ء، ش، ص، ض) as illustrated in Figure 1 when these alphabets occur at the beginning or the middle of the word, a dent should be attached to them. Some of these letters originally already have a notch, which may confuse the writer of how many notches he/she should add when attaching those alphabet letters with the others. Examples of these confusing notches: صبااح، سناء، شتاء، ضياء
Dots’ Location and Number

The location and number of dots in the Arabic language is another possible cause of spelling confusion (Albajja, 2001). For young writers, it is not easy to remember the number of dots that occur for some letters of the alphabet and its location, in addition to the way it should be presented depending on the alphabet location in the word. Some young writers may use tricks to avoid the entire dots disturbance by putting the dots far from the letters, which may result in producing a different word that shares a high graphic similarity. For example, these words that share high graphic similarity and the change of dots’ location and number would produce another word:

- بنتين (bentayn: two girls) – (teneen: dragon)
- بنتين (bain: sons)
- بنتين (bain: two houses)

Vowels in Arabic

There are 6 vowels in Arabic: 3 short, 3 long. Ālif ٌ, wāw َ, and yā’ ی are the long vowels in Arabic. Short vowels are represented by signs above or below the consonants carrying them. Short vowels are found in the Koran and children’s books where the reader has to read precisely, but in other scripts, such as the media, the reader has to deduce them. The three short vowels are: fat-ha فتحة indicated by a stroke above a consonant as ٌ da and pronounced like the sound “u” in “nun”, damma ضممة indicated by a miniature wāw َ above the letter as َ du and pronounced the u in “bull”, kasra كسرة indicated by a stroke below the consonant as ٍ di and pronounced, approximately, like the sound i in did (Haywood & Nahmad, 2003). Wagner (1998) found that it is difficult
for young poor readers to read newspapers, magazines, and environmental prints fluently without diacritical marks.

Diacritical Marks

Arabic is a Semitic language, as is Hebrew. Both use alphabets in which mainly the consonants are represented in writing (Sakkal, 1993). Using diacritics, also called miniatures, to represent vowels is optional. Previously, Arabs could effortlessly figure out words composed with letter shapes and could distinguish between letters based on the same shape by their relationship to surrounding letters and words in the sentence. A good knowledge of grammar helped them avoid misreading a word or a whole sentence. Written text was often used as an aid to remembering what the reader had learned orally. While Arab Muslims could check the written text against the Koran passages they had memorized, non-Arab converts, such as the Persians, Turks, North Africans, and Spaniards, needed a way to learn Arabic that helped them clearly distinguish between letters that shared the same shape. They also needed to know how to fill in the vowel sounds not represented by any letters. In early Umayyad times, scholars wanted to help learners clearly identify the Arabic letters and make the appropriate short vowel sounds when reading a written word. Abul Aswad al Du’ali (d. 688), the legendary founder of Arabic grammar, invented a system of colored dots, with red dots indicating vowels. Al Khalil ibn Ahmad al Farahidi, who died in 786, refined this system to include special diacritical marks (Sakkal, 1993).

In Arabic writing, the vowels are not explicitly written; so the reader must know the language in order to restore them. However, in editions of the Koran or in didactic works,
a vocalization notation in the form of diacritic marks is used. Moreover, in vocalized texts, there is a series of other diacritics of which the most modern are an indication of vowel omission (sukūn) and the doubling of consonants (shadda):

a. **Shadda**: Literally means strengthen. It indicates the combination of two identical letters where the first one has sukūn and the second is vowelled into one letter. For instance, the word innate in English, where the first n has what is called in Arabic sukūn and the second one is vowelled, would be written iñate if it was an Arabic word. The shadda is represented by the sign ʼ on top of the vowelled letter.

b. **Maddah**: Literally means lengthen. It indicates that hamza is followed by the long vowel a; for instance, the word amana (he believed) is written آمن. The Maddah is represented by ~over the hamza.

c. **Sukūn**: Indicates the absence of a vowel- sign and is represented by the sign ʼ over the unpowelled letter. For instance, the word smart in English would be written smar’t if it was an Arabic word.

1. **Nunation**: Frayha (1958) identifies nunation as “indefinite nouns and adjectives in the absolute state, that is when they are neither governed by the definite article (ال ) nor are in the construct or possessive case end in a nun (n)” (Farayha, 1958, p.173). For instance, ketab (book) in Arabic would be ketabun, ketaban, or ketabin based on syntax. Arabic writers should know the exceptions of the nunation rules and that not all the words can be nunated.
Hamza

The Arabic alphabet now uses the hamza to indicate a glottal stop, which can appear anywhere in a word. This letter, however, does not function like the others: it can be written alone or on a support in which case it becomes a diacritic. The rules of writing (hamza ⍌) are complicated and are a valid reason for spelling confusion in Arabic. Hamza is a form of plosive consonant on the upper part of the letter غ (ayn). It has complicated rules in that it usually needs a companion on which to lie over on what is called Kursi (seat) which can be ʾalif ʿayn, wāw ʿayn, and yāʾ ʿayn. As an example: ﯽ ي أ, but it may be found without a companion letter in some cases. The Arabic name hamza means compression, i.e., of the larynx (Farayha, 1958). In English, hamza is similar to the names of a, e, i, o, or “ours” when pronounced in a sentence, such as (it is not ours). In a word, the hamza can be at the beginning (in this case it is on an ʾalif) or somewhere in the middle (it may then adopt one of the following letters as a seat ﯽ و أ; or it may be at the end, above a seat, or alone.

The Definite Article

The definite article (الّ) is used for masculine, feminine, neuter, and for both singular and plural to introduce and talk about a known subject. Example: "A dog" = الكلب, "the dog" = الكلب + الّ. If the hamza of (الّ) does not begin a sentence, it would fall out in pronunciation. For instance: ﯽ madrasa (the school), and Ketabu – ﯽ madrasa (school book). ﯽ is dropped from the article (Al) in this case.
L also can be dropped from the article (Al) when it “precedes a consonant whose articulation involves the usage of the same organ of speech” (176), and it compensates the nunation. For instance, shamsun (a sun), Ash-shamsu (the sun). Consonants with which (L ل) of the definite article is assimilated the group of sun-letters. These letters are: ﷗ ﻥ ﻥ ل ﻆ ﺐ ﺕ ﺮ ﺼ ﺷ ﺟ. The other group of letters is called moon-letters which are: ﷏ ﺢ ﻦ ﻦ ﺔ ﺔ ﺔ ﺔ ﺔ. The groups are divided referring to the different pronunciations of the sun and the moon in Arabic: ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ ﻢ 

Both A and L of the definite article (al) can be dropped in pronunciation (but not in writing) when the reader has to make the elision in the possessive case (called ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ ﺔ 

For example, Al-rajulu (the man) and Baytu (a house) when they are added together in Baytu-ra-julu (the man’s house), both A and L are dropped.

Orthographic Rules and Exceptions

In Arabic writing, students may experience orthography problems that reflect their spelling. Some of the common orthography problems are:

- Some sounds are pronounced but not written. (Đhālika, as if there is a long vowel a، : is written Dhlika, as if there is only a short vowel a)
Some alphabets have various written patterns.

Orthography rules are difficult to master, may have several exceptions, and may not be typical and agreed on by all the Arabic linguists.

Orthography depends on grammar and morphology rules that demands good knowledge of exceptions to rules and words’ roots (Rajab, 1995). I

In the past tense in third person masculine form, the plural form is written and not pronounced. For example (Dhāhabu, ذهبا: they went).

Holy Koran Orthography

The Koran was written in a particular rasm (orthography) which became known as al-rasm al-`Uthmānī (the `Uthmanic way of writing the text of the Koran) also referred to as rasm al-muṣḥaf. The Koran has always been a major grammatical and linguistic authority. Whoever reads the Holy Koran will find some orthography distinctions. Certain Koran’s orthography does not follow the rules of Arabic writing, which can cause a slight spelling and reading problem. When young students are asked to read the Koran, they usually apply the rules they are taught in learning standard Arabic. Applying the entire standard Arabic orthography rules to the Koran can result in reading miscues and shifting the Koran’s orthography into regular writing can result in invented spelling. The Koran contains many letters that are used differently than is usual in writing. There is, for instance, “pray” is written in the Koran (الصلاة) and in standard Arabic (الصلاة). According to Abdel Halaim (nd) Suyūṭī (909/1503) reduced the rules of the Koran rasm to 6 as follows:
1. The rule of deletion, ḥadhf (as in علم)

2. The rule of addition, ziyādah (as in the wāw in الربا instead of الربا)

3. The rule of substitution, badal (as in مشكلة, نجاة, غدأة instead of نجاة, غدأة, غدأة.

4. The rule of the hamza, (as in as in خسنين)

5. The rule of joining and separating, al-wasl and al-fasl (as in أمن).

6. The rule of cases where there are two canonical readings but the text is written according to one of them. For instance, فكرين is read fakahīn or fākīhīn.

Punctuation Marks

Punctuation marks are more than pauses and exclamation. They serve as meaning units in the text. Punctuation in writing is like intonation in reading and speaking. Wilde (1992) noted that it is not known exactly when children learn to punctuate, but research suggests that they start when they are familiar with the language system. Spelling and punctuation skills are an organization and structure experience and learned through intellectual process and not memorization (Wilde, 1992).

Punctuation marks in Arabic language are: ( ) .... " " ! - . : ؛ , . These two additional marks can be added [ ] and - -. The difficulty of punctuation marks is embedded in their use within the sentence. The major punctuation marks problems are:

B. The use of some marks can be confusing or overlapping with other marks.

C. Some marks seem to be problematic such as 

D. The decision of adding or ignoring a punctuation mark can be puzzling and time consuming.
Arabic Morphology

Arabic is based on a “consonantal root system” which means that most of the words are derived from one root that is usually a verb. To make words out of their roots, letters are prefixed, infixed, and suffixed to the root. Long vowels also can be added between the consonants of the root, which results in new words and new meanings. Incorrect derivation of the root is a considerable reason of invented spelling among Arabic students (See “Conjugation” in chapter 5). The majority of words are derived from three-consonant roots, in which the vowels are not written. For example, the root /da-r-s/ from /darasa/, "he studied," is used to form, with the addition of affixes, /madrasa/, "school," /diraasa/, "studying," /mudarris/, "male teacher", /dars/, "lesson," etc. (Cross, 2003).

Because of the emphasis on consonants, the Arabic alphabet consists almost purely of consonants; twenty-five letters out of twenty-eight are consonants (where two of the vowels can be used as consonants too).

The Arabic Morphology characteristics are found to cause confusions not only in spelling but also on general speaking in standard Arabic. Looking at the data, I can sum up the characteristics in:

- Semitic nouns have only two genders (masculine or feminine) but three numbers (singular, dual, and plural).
- Semitic languages distinguish gender in both the second and third person. So, for instance, "he studies" [yadrusu] is contrasted with "she studies" [tadrusu] and "you study, masculine" [tadrusu] with "you study, feminine" [tadruseen]. So, it is
not merely the question of just substituting a pronoun but also the addition of prefixes and suffixes in order to conjugate a verb according to gender and person.
CHAPTER 4

MEHTODOLOGY

The Context of the Study

Elementary schools in the United Arab Emirates (UAE) are divided into two cycles: The first cycle is from the first to fourth grade, and the second cycle from fifth to ninth grade. Only UAE and Gulf region nationalities are allowed to attend in UAE public schools. All the students in UAE schools share the same language, traditions, religion, and a similar dialect. Public schools provide the entire school curricula in Arabic except for English as a foreign language. However, most private schools in UAE teach the entire school curricula in English except for the same Arabic and Islamic Studies curriculum public schools offer. UAE public schools are not coeducational. Boys’ public schools are instructed and directed by male teachers, while girls’ schools are instructed and directed by female teachers.

The UAE Ministry of Education prepares the curricula used at all public schools. These curricula are developed and modernized to satisfy the future demands and cumulative needs of the UAE. The UAE Ministry of Education provides teachers with a guide to teach Arabic language arts and grammar in every grade. I used The Sixth Grade Language Teachers’ Guide to Teach Arabic Language and Grammar Book (2001) because it is used by the teachers to set up the lessons in dictation and composition which is the focus of this research study. In UAE public schools, Emirate teachers and some expatriate Arab teachers teach school curricula in standard Arabic. In Arabic language
classes, Arabic language teachers must use standard Arabic language only in delivering instructions to their students.

Since only the Arabic language is used to communicate in the classroom, the curriculum focuses on standard Arabic language and its grammar rules. Reading, writing, oral conversations, homework, assignments, and tests have to be in standard Arabic only. Standard Arabic is used for evaluation, homework, assignments, and tests, and teachers’ observation. When writing and conversing, students must apply their knowledge of the standard Arabic language, its grammar, and how the language works. Students learn the grammar rules gradually throughout the school year. Grammar rules get more difficult as students mature.

Composition and dictation reflect students’ knowledge and application of the Arabic language written system. According to The Sixth Grade Language Teachers’ Guide to Teach Arabic Language and Grammar Book (2001), there are specific skills to be mastered in sixth grade. In dictation for instance, I analyzed spelling rules that students should master like: Al-lām Alsh-shamsiya and Alqamariya (اللام الشمسية والقمريه), nunation (التنوين), open and tied tā’ (التيتانة المربوطة والمقطورة), Hamzatul-wasl and al-fasl (الخاء والفصل والوصل), the definite article (التعريف), punctuation marks (علامات الترقيم), and writing hamza in different locations of the word (كتابة الهمزة في وسط أو أواخر الكلمة وفي المواضع المختلفة).

In composition, the teachers’ guide states that it is important to help students be equipped with: 1) knowledge and skills they need in communication and life and 2) written and oral skills to help them in multiple contexts, such as improving students’
conversations, writing letters and forms, conducting interviews, answering phone calls, providing and understanding directions, defending their opinions, and possessing logical thinking (Abu Hatab, Alsaharin, Beteeha & Fayed, 2001).

Since this research study concentrates on students’ invented spelling, I analyzed dictation and composition samples completed in the classroom taught by Emirate teachers only. Expatriate teachers were not included because they may speak various Arabic dialects.

I developed and selected instruments and tools that helped me in analyzing the Arabic language spelling inventions. In the reviewed Arabic literature, I found the following spelling inventions (called misspellings): “hamza: ٠”, “open tā’: 圻 and tied tā’: ﺝ”, “tied tā’: ﺝ and hā’: ٠”, “vowel and miniatures”, “letter missing dents”, “nunation”, and “the definite article: ﻮ” as shown in Table 4.1. In the reviewed study (See chapter 2), the focus was on students’ misspellings and the way they appear in students’ compositions in order to locate areas of spelling difficulties and to design spelling instructions (Abu-Alhaija, 2001; Albajja 2001, 2002; Alnashef, 1999; Ibrahim, n.d.; Shehata, 1990).

In the table below, I list misspellings studied in previous Arabic literature and references. Since these spellings were invented by different Arabic students from different regions or countries in the Arab world, they provide a rich and valuable base for this research. Because grammar is represented in Arabic spelling, most of the spelling inventions shown in Table 4.1 reflect the writers’ knowledge of syntax and grammar.
Table 4.1: Possible Spelling Inventions Found in Previous Arabic Literature

<table>
<thead>
<tr>
<th>No.</th>
<th>Types of misspellings:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Hamza (اء):</strong></td>
</tr>
<tr>
<td></td>
<td>A Hamzatul-Fasl (™ or ±) and Hamzatul-Wasl (طول)</td>
</tr>
<tr>
<td></td>
<td>B Combined with vowel ء، ؤ</td>
</tr>
<tr>
<td>2</td>
<td>Substituting Open تاء (تاء) with Tied تاء (ِ or ﺔ)</td>
</tr>
<tr>
<td>3</td>
<td>Substituting Tied تاء (ٍ) with حاء (ـ)</td>
</tr>
<tr>
<td>4</td>
<td><strong>Substituting Vowel and Miniatures Type:</strong></td>
</tr>
<tr>
<td></td>
<td>A Ālif (ا) and Fat-hā (ـ)</td>
</tr>
<tr>
<td></td>
<td>B Wāw (و) and Dhamma (ٌـ)</td>
</tr>
<tr>
<td></td>
<td>C Yā’ (يا) and Kasra (ـ)</td>
</tr>
<tr>
<td>5</td>
<td><strong>Letter Missing Dents:</strong> hook of ten alphabet letters: (ب ت ث ن تي ئ س ش ص ض)</td>
</tr>
<tr>
<td>6</td>
<td>**Nunation (ـ، ـ، ـ، ـ) **</td>
</tr>
<tr>
<td></td>
<td>A Insertion of Nūn</td>
</tr>
<tr>
<td></td>
<td>B Non conventional insertion</td>
</tr>
<tr>
<td>7</td>
<td><strong>The Definite Article (ال):</strong></td>
</tr>
<tr>
<td></td>
<td>A Al- Ash-shamsiya and Al-Al qamariya</td>
</tr>
</tbody>
</table>

I discovered that sixth grade students share the same spelling inventions that were discussed in previous literature on Arabic spelling and documented how Arabic researchers collected and interpreted data. In Table 4.2, I list new spelling inventions that have not appeared before in the literature reviews that I have read. These new spelling
inventions are of great importance for analyzing the Arabic language written system. Further, I used my experience as an Arabic-language teacher and from research I have done examining students’ spelling inventions.

The following new inventions were found in the dictations and compositions samples: another type of spelling invention with “hamza”, substitutions among letter sounds, inventions due to the orthographic similarities across some letters, new invention with the definite article, inventions that are related to syntax, indeterminate words, dialect form, conjugation, and substitution of prepositions. (See table 4.2).

Table 4.2: New Spelling Inventions Found in Research

<table>
<thead>
<tr>
<th>No.</th>
<th>Types of new Spelling Inventions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hamza (‎٠‎):</td>
</tr>
<tr>
<td></td>
<td>A Above Ālif vowel (ا) or below Ālif vowel (ا)</td>
</tr>
<tr>
<td></td>
<td>Sound Similarities:</td>
</tr>
<tr>
<td></td>
<td>1- Sound Similarities Across Letters:</td>
</tr>
<tr>
<td></td>
<td>A  Ġd (ضاد) and  Dhah (ذاء)</td>
</tr>
<tr>
<td></td>
<td>B  Fa (قاء) and  Tha (ثاء)</td>
</tr>
<tr>
<td></td>
<td>C  Qaf (كاف) and  Kaf (كاف)</td>
</tr>
<tr>
<td></td>
<td>D  Haa (حاء) and  Haa (حاء)</td>
</tr>
<tr>
<td></td>
<td>E  Shad (صايد) and  Sain (سائ)</td>
</tr>
<tr>
<td></td>
<td>F  Tah (تاء) and  Tah (تاء)</td>
</tr>
<tr>
<td></td>
<td>2- Sound Similarities Among Words</td>
</tr>
</tbody>
</table>

(See table 4.2).
Orthographic Similarities Across Letters:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Dāl (د) and Dḥāl (ذ)</td>
</tr>
<tr>
<td>B</td>
<td>Rā (ر) and Dāl (ذ)</td>
</tr>
<tr>
<td>C</td>
<td>Zā‘ (ز) and Dḥāl (ذ)</td>
</tr>
<tr>
<td>D</td>
<td>Ayn (ع) and Gайн (غ)</td>
</tr>
<tr>
<td>E</td>
<td>Nūn (ن) and Zā‘ (ز)</td>
</tr>
<tr>
<td>F</td>
<td>Fā’ (ف) and Qāf (ق)</td>
</tr>
<tr>
<td>G</td>
<td>Ayn (ع) and Sād (س) (in the middle of an Arabic word)</td>
</tr>
<tr>
<td>H</td>
<td>Ayn (ع) and Kāf (ك) (in the middle of an Arabic word)</td>
</tr>
<tr>
<td>I</td>
<td>Lām (ل) and Nūn (ن) (at the end of an Arabic word)</td>
</tr>
</tbody>
</table>

The Definite Article (ال):

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Insertion or Deletion of the definite article</td>
</tr>
</tbody>
</table>

Syntax:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Gender wordings</td>
</tr>
<tr>
<td>B</td>
<td>General Grammar</td>
</tr>
</tbody>
</table>

Indeterminate Words

Dialect Form

Conjugation

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Nouns</td>
</tr>
<tr>
<td>B</td>
<td>Verbs</td>
</tr>
</tbody>
</table>

Substituting Prepositions (ب من، إلى، عن، لم، على، في، رض، حتى، و، تت)
These new spelling inventions shown in Table 4.2, compiled with the misspellings from the literature review listed in Table 4.1, became a valid instrument that I developed in order to study spelling inventions in Arabic. Table 4.3 represents the analysis of Arabic spelling inventions to answer the first three questions of this study. The table represents new inventions found in the spelling data I analyzed as well as the inventions identified as “misspellings” in my review of the literature of research on Arabic spelling (See Chapter 2). I recategorized these various spelling inventions into three language categories.

1. **Phonological level:** In this category, I analyzed spelling inventions that are related to the sounds of Arabic language such as, hamza, open tāʾ and tied tāʾ, tied tā’ī and hāʾ, substitutions of vowels and their miniatures, sound similarities across some letters and words, nunation, indeterminate words, and the use of dialect forms instead of standard Arabic vocabulary.

2. **Grammatical level:** In this category, I analyzed spelling inventions that reflect the grammatical and syntactic aspects of the Arabic language, such as hamza combined with a vowel, the definite article, syntax, conjugation, use of prepositions, and gender variations.

3. **Orthographic level:** In this category, I analyzed spelling inventions that are related to the visual aspects of the Arabic language, such as dents, orthographic similarities across some letters, and punctuation marks.

   Even though many of the spelling inventions reflect the grammatical level of the language such as nunation, vowels and their miniature for instance, they are analyzed
based on how they were invented in students’ writing. I use the categories shown in table 4.3 to analyze my first three research questions. I discuss them in the same order as shown in table 4.3 throughout my analysis to make it easier for the reader to follow.

Table 4.3: Analysis of Arabic Spelling Inventions

<table>
<thead>
<tr>
<th>1) Phonological Level:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Hamza (۰)</td>
</tr>
<tr>
<td>A Hamzatul-Fasl (١ or !) and Hamzatul-Wasl (١)</td>
</tr>
<tr>
<td>B Above Ālif vowel (۰) or Below Ālif vowel (!)</td>
</tr>
<tr>
<td>2 Substitution of Open Tā’’ (ت) and Tied Tā’’ (ة or ئ)</td>
</tr>
<tr>
<td>3 Substitution of Tied Tā’’ (ة) with Hā’ (ـ)</td>
</tr>
<tr>
<td>4 Substitution of Vowel and Miniatures:</td>
</tr>
<tr>
<td>A Ālif (۰) and Fat-ha (ـ)</td>
</tr>
<tr>
<td>B Wāw (و) and Dhamma (ـ)</td>
</tr>
<tr>
<td>C Yā’ (ي) and Kasra (ـ)</td>
</tr>
<tr>
<td>5 Sound Similarities:</td>
</tr>
<tr>
<td>1- Sound Similarities Across Letters:</td>
</tr>
<tr>
<td>A Dād (ض) and Dḥā’ (ط)</td>
</tr>
<tr>
<td>B Fā’ (ف) and Thā’ (ث)</td>
</tr>
<tr>
<td>C Qāf (ق) and Kāf (ك)</td>
</tr>
<tr>
<td>D Ḥā’ (ح) and Hā’ (ه)</td>
</tr>
<tr>
<td>E Ṣād (صاد) and Ṣīn (س)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>F</td>
</tr>
</tbody>
</table>

2- Sound Similarities Among Words

6 | **Nunation (ن – ن – ن –)** |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Insertion of Nūn</td>
</tr>
<tr>
<td>B</td>
<td>Non-standard insertion</td>
</tr>
</tbody>
</table>

7 | **Indeterminate Words** |

8 | **Dialect Form** |

2) Grammatical Level:

1 | **Hamza Combined with a Vowel (ء، و، ی)** |

2 | **The Definite Article (ال):** |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Insertion or Deletion of an article</td>
</tr>
<tr>
<td>B</td>
<td>Al Ash-shamsiya/ Al Alqamariya</td>
</tr>
</tbody>
</table>

3 | **Syntax** |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Gender wordings</td>
</tr>
<tr>
<td>B</td>
<td>General Grammar</td>
</tr>
</tbody>
</table>

4 | **Conjugation** |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Nouns</td>
</tr>
<tr>
<td>B</td>
<td>Verbs</td>
</tr>
</tbody>
</table>

5 | **Substituting Prepositions (ب، من، إلى، عن، ل، على، في، رب، حتى، و، ت):** |

3) Orthographic Level:

1 | **Insertion or Deletion of Dents (with ten alphabet letters: ب ث ن ي ئ س ش):** |
### Orthographic Similarities Across Letters:

<table>
<thead>
<tr>
<th>Letter</th>
<th>Similar Letters</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Dāl (د) and Dhāl (ذ)</td>
</tr>
<tr>
<td>B</td>
<td>Rā (ر) and Dāl (د)</td>
</tr>
<tr>
<td>C</td>
<td>Zāī (ز) and Dhāl (ذ)</td>
</tr>
<tr>
<td>D</td>
<td>Ayn (ع) and Gayn (غ)</td>
</tr>
<tr>
<td>E</td>
<td>Nūn (ن) and Zāī (ز)</td>
</tr>
<tr>
<td>F</td>
<td>Fāʾ (ف) and Qāf (ق)</td>
</tr>
<tr>
<td>G</td>
<td>Ayn (ع) and Ṣād (س) (in the middle of an Arabic word)</td>
</tr>
<tr>
<td>H</td>
<td>Ayn (ع) and Kāf (ك) (at the beginning of an Arabic word)</td>
</tr>
<tr>
<td>I</td>
<td>Lām (ل) and Nūn (ن) (at the end of an Arabic word)</td>
</tr>
</tbody>
</table>

### Punctuation Marks

Participants

For this study, I selected a population of sixth grade students’ who reside in Dubai City, United Arab Emirates. I selected sixth grade purposefully, because it is the last grade in the elementary school cycle where students are expected to acquire the basic spelling rules needed by an Arabic writer. To avoid the influence of the same instruction and instructor and to avoid bias, three different public schools in different locations with different teachers were selected. The three public schools are for girls, which fits culturally with the fact that I am female researcher. The number of students is different from one classroom to another.
Dictation and Composition Tests

In UAE, students learn to write through dictation, composition, and handwriting. Dictations and compositions are used in sixth grade classroom as mandated by the Ministry of Education regulations also as assessment tests. Students are dictated texts that are designed by experts from the UAE Ministry of Education. Compositions topics are also provided by the Ministry of Education (See chapter 2 for more information about teaching composition in the UAE public schools). After the teacher evaluates the dictation and composition tests, she returns them to students so they can check their grades and inventions. Then, the teacher collects students’ notebooks or test sheets (if used) so they are available when needed. If she is asked to do so, the teacher classifies students based on their grades using students’ evaluated papers.

Because students are tested on different topics in dictation and composition throughout the school year, I chose to study the first dictation and composition topics that are assigned by the UAE Ministry of Education to students at the beginning of the school year, because they reflect students’ accumulated knowledge of Arabic spelling from the previous five grades. The dictation piece that I selected was called “The Wise Answers,” and explains how wise old men provide wise answers in different situations. The dictated piece consists of 46 words, and contains the entire Arabic alphabet (See Figure 4.1). I asked teachers about the steps for administering these dictation tests. They all followed the same procedures. Students have special notebooks for dictation and composition with their names, grade, and section labeled on the cover page of the notebooks but not on
every test inside. To administer a dictation or a composition test, the teacher distributes students’ notebooks and asks them to open to a new page.

Figure 4.1: The Dictation Piece

<table>
<thead>
<tr>
<th>من أجل الإجابات</th>
</tr>
</thead>
<tbody>
<tr>
<td>أوصني</td>
</tr>
<tr>
<td>قال رجل للشافعي رضي الله عنه: أوصني</td>
</tr>
<tr>
<td>فقال: خلقك الله حرة، فكن كما خلقك الله</td>
</tr>
<tr>
<td>شهدنا عليك بهذه</td>
</tr>
<tr>
<td>قال رجل في مجلس أبي حنيفة النعمان: ما كذبت قط!</td>
</tr>
<tr>
<td>فقال أبو حنيفة: أما نحن فقد شهدنا عليك بهذه،</td>
</tr>
<tr>
<td>انصر أخاك طالما أو مظلمًا.</td>
</tr>
</tbody>
</table>

Translation
The Wise Answers
Advise me
A man said to Imam Shafie, advise me
Imam Shafie replied, God created you free, remain free

We are Witnesses
A man said to Imam Abu Hanifah: I have never lied in my entire life!!
Abu Hanifah replied: We are witnesses that you never have,
Patronize your pal if being oppressed or oppressive.

In sixth grade, the teacher dictates sentences carefully and clearly while the students write down what they hear. The teacher will provide punctuation during the
dictation saying period, comma or question mark as appropriate. After that, the teacher asks the students to review what they have written and correct what needs to be corrected. At the end, the teacher collects the notebooks. These notebooks are always kept in the teachers’ office and returned only for students’ review. Dictation class lasts from 15-30 minutes once a week, based on students’ grade level and the length of the text. Students are given five more minutes for editing and review before returning their notebooks to the teacher. Since evaluating spelling inventions were not the aim of this study, teachers’ evaluation techniques were not investigated.

In the compositions I analyzed, students were required to write about the holy month of Ramadan since the month of Ramadan occurs at the beginning of the 2005 school year. The topic of the composition I analyzed is titled “Benefits of the Great Month of Ramadan.” In addition to writing about Ramadan, students were asked also to write about the benefits of fasting, and its healthy habits. As mentioned previously in chapter 2, composition class is part of the Arabic language class and takes place once a week. The duration of school classes is 45 minutes which is used in composition class for a brief discussion about the topic, writing, editing, and sometimes for evaluation. The language teacher follows a procedure similar to dictation starting by distributing composition notebooks and ending by collecting them. Students’ names are not written inside the notebook. When students are asked to write a composition, the language teacher provides the composition topic and the main headings. Students then are asked if they have any questions or need any explanations before they start writing. In general, students’ writing is not to exceed 20 lines or 200 words. Students spend approximately 35
minutes in writing and editing their compositions. When the testing time is over, teachers collect the composition test papers or notebooks for evaluation. Teachers archive the students’ notebooks in their office.

Research Procedure

I asked my sponsor, The United Arab Emirates University, for permission to conduct the research and they sent their approval to the UAE Ministry of Education. They asked the Ministry to cooperate with me as much as needed to carry out this research. The UAE Ministry of Education faxed approval to do the research to three public girls’ school that I chose. Meanwhile, the University of Arizona Human Subjects forms were translated into Arabic. Before conducting the research, I received acceptance of my research study from Human Subjects committee. Later, sixth grade language teachers sent Human Subjects forms home with students to be signed by their parents and then by the students (See Appendix A).

Three Arabic language teachers from the three schools I visited were asked to collect samples of sixth graders’ compositions and dictation pieces. Since the dictation and composition topics are the same for all public schools, I asked the teachers for the first dictation and composition topics students wrote. The teachers copied the dictation and composition pages from their sixth grade students’ notebooks without copying the first page or the cover that was labeled with students’ names. As a result, the names of the students were unknown to me.
Research Questions

The following are my research questions:

1. What are the most common spelling inventions among UAE sixth grade students in their dictation?

2. What are the most common spelling inventions among UAE sixth grade students in their composition?

3. What are the spelling inventions similarities and differences found in UAE sixth grade students’ composition and dictation?

4. What strategies do the UAE sixth grade students report they use when standard spelling is unknown?

Dictation and composition samples were analyzed to answer the first and second research question regarding the students’ spelling inventions found in the two different writing contexts (dictation and composition).

To answer the third research question, both sets of data analyzed to answer questions one and question two were again analyzed and compared to explore the differences and similarities of spelling inventions in both dictation and composition. I answered question three by investigating how context influences the occurrence of spelling inventions.

To answer the fourth research question, I asked the three teachers to choose six to eight students for the interview (2 above average, 2-4 average, and 2 below average) as per the grade book. The interview with each student took place one at a time in the social
worker’s office. Each interview took approximately 10-12 minutes. Teachers were not allowed in the room during the students’ interviews. By students answering each question, I explored strategies students use when spelling is invented and when conventional spelling is unknown. I analyzed these responses to answer the fourth research question (What strategies do the UAE sixth grade students reported they use when standard spelling is unknown?).

Data Collection

With the United Arab Emirates University (UAEU) and the UAE Ministry of Education approvals to conduct the study, the principals of the three schools I visited asked sixth grade Arabic language teachers to cooperate with me. By visiting three different six-grade classes, one in each school, I was able to collect the writing samples of eighty participants distributed in the three classes (26+26+28). I asked the three sixth grade teachers to provide me with samples of students’ written compositions and dictations. The eighty participants supplied 160 samples between dictation (80) and composition (80). I interviewed 25% of the students for their responses about the spelling strategies they use. With the help of the Arabic teachers, 20 sixth grade participants were selected from the three schools, distributed as 6, 6, and 8 students.

There are three sets of data for this study: 1) students’ dictations to answer the first question, “what are the most common spelling inventions among UAE sixth grade students in dictation”; 2) compositions to answer the second question, “what are the most common spelling inventions among UAE third grade students in composition”, and 3) students’ interviews to answer the fourth question “what strategies do the UAE sixth
grade students’ report they use when standard spelling is unknown?” The third question: “what are the similarities and differences in spelling inventions found in both composition and dictation” was answered by calculating the statistical analyses in the spelling inventions of the dictation samples and comparing them with the statistical analysis of the spelling inventions found in composition samples. Table 4.4 explains the steps followed to answer the study’s four questions.

Table 4.4: Research Questions and Sets of Data

<table>
<thead>
<tr>
<th>Data Sets</th>
<th>Description</th>
<th>Questions answered</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dictation</td>
<td>Dictation test administered by teachers to assess the students’ Arabic language spelling mastery and as indicators of their achievement and progress</td>
<td>Q. 1</td>
<td>Counts and percentages of specific Arabic spelling features.</td>
</tr>
<tr>
<td>(80 samples)</td>
<td></td>
<td></td>
<td>Subtraction and signs (=, +, -) used to compare specific Arabic spelling features.</td>
</tr>
<tr>
<td>Composition</td>
<td>Composition test used by teachers to assess students’ knowledge about Arabic written system, spelling and grammar.</td>
<td>Q. 2</td>
<td>Counts and percentages of specific Arabic spelling features.</td>
</tr>
<tr>
<td>(80 samples)</td>
<td></td>
<td></td>
<td>Subtraction and signs (=, +, -) used to compare specific Arabic spelling features.</td>
</tr>
<tr>
<td>Interviews (20 participants)</td>
<td>Interview by the researcher to investigate spelling strategies students use when standard spelling is unknown both in dictation and composition.</td>
<td>Q.4</td>
<td>Counts only: discourse analysis of transcripts of interviews</td>
</tr>
</tbody>
</table>

All the subjects were studied anonymously to assure privacy by giving each student a number from 1-80, and letters CMP or DCT to indicate if the sample was collected from a composition or a dictation. No actual names were used in the entire study because the focus of the study was on spelling inventions and not on the inventor. In addition, all the schools were presented anonymously.

Regarding the third set of data, an open-ended interview with selected students was analyzed to answer the fourth question of the study. Questions for the interview are modified from The Burke Reading Interview (BRI) and Wilde’s (1992) spelling interview (See appendix B). Questions were used to investigate the spelling strategies students use when they come to words they do not know how to write. Questions were designed with consideration that spelling strategies used during dictation writing might be different from their composition. Moreover, questions were asked about students’ understanding of how their dictation and composition pieces were evaluated. This interview was translated into the Arabic language and can be of great aid to teachers and future researchers.
Data Analysis

Several Arabic studies list the misspelling of the Arabic written system as impediments, but not inventions. I used these conclusions on misspellings in building the research instrument to analyze the spelling of the writing samples. I also added new spelling inventions based on my analysis of the writing samples. This spelling list that I call Analysis of Arabic Spelling (See Table 4.3) became my research analysis instrument and will be of great importance to the Arabic written system, the teaching process, the students, and the parents.

Data was coded after categorizing all the spelling inventions found in both composition and dictation pieces. I used simple statistics to answer the research questions (frequencies, counts, percentages, summations, additions, and subtractions). For each spelling feature, a symbol was provided for statistical analysis.
When conducting the research, I faced some difficulties. Regarding the Arabic language, it is not possible to talk about a language with all its aspects in one study. In that, I chose to translate only the grammatical, phonological, and orthographical rules that were discussed in this study, and to explain the rules to the depth that the reader would understand the findings of this research.

Another difficulty associated with translation was translating students’ inventions to English. Surprisingly, some spelling inventions that reflect semantic knowledge made sense when translated into English.
Eighty dictation and eighty composition samples were collected from three sixth grade classrooms in different public schools. All participants had the same dictation piece assigned from the United Arab Emirates (UAE) Ministry of Education. In addition, they were asked to write a composition about “The Holy Month of Ramadan” and were allowed to write freely in their own way about the topic. For reference, the spelling rules of the Arabic language are explained in chapter 3. Each spelling invention was analyzed and explained according to the Analysis of Arabic Spelling Table (See Table 4.3).

To answer my first three research questions, I tallied those students who had the specific spelling invention at least one time. In Table 5.1, I calculated the percentage of the students who produced the specific invention. I then calculated the number and percentages of similarities and differences. The sign (+) indicates that the students as a group produce the specified spelling invention more often in dictation than in compositions. The sign (-) indicates that students as a group produce the specific spelling inventions more often in compositions than dictation. The sign (=) indicates that the same number of students invented the specific spellings equally between dictation and compositions. Percentages of these similarities and differences were calculated as shown in Table 5.1. Arabic letters are transliterated in the table according to Wikipidia Organization (2005).
Table 5.1: Number and Percentages of Spelling Invention Categories in the Arabic Language

<table>
<thead>
<tr>
<th>Categories of Spelling Inventions</th>
<th>DCT</th>
<th>CMP</th>
<th>Sim./Dif</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
</tr>
<tr>
<td>1) Phonological Level:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hamza (ṣ):</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A Fasl (١ or ١) and Wasl (١)</td>
<td>54</td>
<td>68</td>
<td>48</td>
</tr>
<tr>
<td>B Above Álif (١) or Below Álif (١)</td>
<td>8</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>2 Substitution of Open Tā’ (ت) and Tied Tā’ (� or ﴾)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tā’ (� or ﴾)</td>
<td>42</td>
<td>53</td>
<td>19</td>
</tr>
<tr>
<td>3 Substitution of Tied Tā’ (�, ﴾) and Hā’ ( ﴾)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hā’ ( ﴾)</td>
<td>0</td>
<td>0</td>
<td>14</td>
</tr>
<tr>
<td>Sound Similarities:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sound Similarities Across Letters:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A Dād (هـ) and Dhā’ (ضاء)</td>
<td>26</td>
<td>33</td>
<td>6</td>
</tr>
<tr>
<td>B Fā’ (فاء) and Thā’ (شاء)</td>
<td>3</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
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<td>D</td>
<td>حاء’ (حاء) and حاء’ (حاء)</td>
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<td>E</td>
<td>ضاد (ضاد) and صين (صن)</td>
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<td>Nunation (ن - ن - ن)</td>
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<td>Insertion of Nûn</td>
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<td>Non-standard insertion</td>
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3) Orthographic Level:

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<td>Orthographic Similarities across Letters:</td>
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<td>Ayn (أ) and Ṣād (س) (middle)</td>
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<td>-3</td>
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<td>Ayn (أ) and Kāf (ك) (middle)</td>
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<td>1</td>
<td>3</td>
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<td>Lām (ل) and Nūn (ن) (end)</td>
<td>14</td>
<td>18</td>
<td>1</td>
<td>1</td>
<td>+13</td>
<td>16</td>
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<td>80</td>
<td>100</td>
<td>-100</td>
<td>12</td>
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</table>

DCT: Dictation, CMP: Composition, Sim. /Dif.: Similarities and Differences

(+): indicates that spelling invention occurred more often in dictation than in compositions

(-): indicates that spelling inventions occurs more often in compositions than in dictation

(=): indicates that spelling invention occurs evenly between dictation and composition
Statistical Analysis of Spelling Inventions in Dictation and Composition

By examining the statistical analysis, it became obvious that there were many more spelling inventions that occurred in composition than in dictation. Limiting students to dictation reflects only inventions of particular spelling rules, while letting students write freely as in composition, reveals what students know about the Arabic written language and not only the mastery of particular spelling rules. Composition and dictation are important in language education in the UAE. In dictation, students practice their knowledge of particular spelling rules that they may avoid in composition. In composition, on the other hand, students practice not only their knowledge of newly taught spelling rules, but all the grammatical, spelling, and Arabic written language rules they had previously acquired.

Research Questions Analysis

Research Question 1

What are the most common spelling inventions among UAE sixth grade students in Dictation?

In Table 5.1, the column DCT (dictation) refers to the results gathered to answer research question 1. Moreover, it represents the number (N) and percentage (%) of students who had these spelling inventions at least once. Dictation samples reveal the areas of spelling strength and difficulties sixth grade students struggle with in their dictation. As explained in chapter 4, dictation samples were thoroughly studied to determine the spelling inventions from the eighty dictation samples received. Going
through these inventions, I found that some spelling inventions were not present in
dictation and those are shown as zero percent (0%). In other words, there are no
opportunities for students to show their knowledge of these specific inventions. For
instance, there are no inventions in the use of punctuation marks in dictation samples
because the teachers dictated the placement of each required punctuation mark as part of
the dictated text.

I analyzed spelling inventions found in students’ dictation based on the three
categories of language shown in Table 5.1.

1) Phonological level

Hamza:

Inventions with the “Hamza” types in sixth grade students’ dictation was high
(68%), especially the differentiation between “hamzatu al-wasl” and “hamzatu al-fasl”.
Furthermore, 10% of the sample reveals spelling difficulties in writing “hamza” above or
below the letter “Ālif” (ا ل).

Substitution of Open Tā’′ and Tied Tā’′:

More than half the participants, 53% of the students, had this kind of invention in
their dictation sample. For example, the “tied tā’′” in “حنية” was written “open tā’′” as “
حنية” which is not conventional. Conventional writing of tied tā’′ and open tā’′ requires
knowing the grammatical rules of open tā’′ (explained in chapter 3). In addition, the
writing rule of open tā’′ can be easily confused with tied tā’′ when vowelled. On the
other hand, if paused, open tā’ would be pronounced as “at” and tied tā’′ would be
pronounced as “ah”. Having this kind of spelling inventions in students’ samples implies
that students represented information from the teacher’s oral speech during the dictation to writing. Ferreiro and Pontecorvo (1999) explain that when children represent oral language in writing, they are reorganizing the units from speech, which is made possible by writing. The grammatical rule of open tā’ is not explained until seventh grade.

Because both open tā’ and tied tā’ represent the same sound “tā’” when vocalized, the substitution of tied tā’ and open tā’ is categorized as a phonological feature.

**Substitution of Tied Tā’ and Hā’**:

The substitution of “tied tā’ (ط) with hā’ (ح)’ did not occur in the entire eighty dictation samples. In my perception, the spelling rule of the “tied tā’” is often substituted with the sound “hā’” because words that end with the “tied tā’” are vocalized as “hā’” when paused. For example, “حنيفة” would be invented as “حنيفة”. In my point of view, this kind of spelling invention did not occur in dictation because the teacher has to vocalize every vowelled letter which makes it easy to figure out that the ending sound is tā’ and not hā’. Moreover, because of the dialect in UAE, tied tā’ and hā’ are pronounced similarly, which makes it a possible invention in composition since written language represents speech. In dictation, students have to pay great attention to every sound their teachers says to be sure not to miss any of the words, which means that in dictation, students are mostly controlled by the text sounds that they hear. Since in dictation students depend on hearing and not making meaning and constructing a text, hearing the sound hā’, results in a spelling invention.
Substitution of Vowels and Their Miniatures:

As explained in chapter 3, Arabic language has three vowel letters which represent the long sounds of /aa/, /ii/ and /uu/. Written vowel diacritics are used to mark short vowels appear only in the Koran, in other religious texts, in classical poetry, in textbooks for children, and in materials for foreign learners, and occasionally in complex texts to avoid ambiguity. Replacing vowel letters with their miniatures (diacritical marks, or the short vowel markings) is another kind of spelling invention found in students’ dictation. Ten percent of the students were not able to distinguish between “ālif (ʼ) and fat-ha (¬). For example, the “fat-ha” in “رضي” was written as “ālif” in “رضي”. Moreover, 8% of the students have difficulties in deciding whether to write “dhamma (’) or wāw (و) like writing “نحن” instead of “نحن”. In addition, 10% of the students wrote “يَّ” (ي) instead of “kasra (‘)”, and vice versa. For instance, some words in standard oral Arabic end with a vowel, but a diacritic is replaced in writing. For instance, “شهدي” was invented as “بهدف” and “وصني” instead of “وصني”. The substitution of the three vowels and their miniatures cannot be detected easily in dictation because of the limitation of word choice.

A thorough study of vowels invented spellings was conducted by Rijnsoever (1979), but was limited to the Dutch language and preschool children, which makes it difficult to apply in this research. Read (1975) studied vowels invented spelling and found that if young spellers are uncertain about a spelling of a vowel sound, they are most likely to replace it with a similar vowel letter. In Arabic the diacritic mark is the closest to the original sound of the vowel, and in those contexts, these kinds of spelling inventions occur. In addition, children perceive the phonetic relation without relating
them to spelling. Young children relate the vowel sounds phonetically more than other since sounds especially that vowels are not simple distinguishable speech sounds (Read, 1975). Students cannot be held responsible for the occurrence of these kinds of spelling inventions because their writing is influenced by the teachers’ way of dictating and the nature of the dictation. These need to be considered when it comes to spelling inventions in dictations.

**Sound Similarities:**

Sound similarities across some letters are another main area of spelling inventions. In the dictation samples, substitution of the sounds َٰ (ض) and ُٰ (ظ) was found frequently. Since UAE public schools accept only UAE citizens, and in the UAE dialect, the sound “َٰ” is never used in daily speech, and always replaced with the sound “ُٰ”, this kind of replacement in student’s spelling can be expected. Studying dictation samples, I found that 33% of the students had difficulties in differentiating between them. An example of this substitution is "ُٰٰٰ" where the standard spelling should be "ُٰٰٰ".

Another sound substitution I found is “ف” as in frog and “ث” as in think. This kind of sound substitution occurred 4%. Furthermore, dictation samples show that sixth grade students substituted the sounds “ق” and “ك” as in خلق (kāf)’ which occurred 4%. That kind of invention occurred 4%. The third substitution that refers to sound similarity is “ت” (ت) and “ط (ط) which occurred 4%. Since these three substitution types occurs infrequently (4%), these substitutions seem to be controlled by most of the sixth grade students. Children try to spell similar words similarly according to
Read (1971). Read (1975) claims that writers make sound similarity inventions for some psycholinguistic reasons, such as “the influence of standard spelling, the predictable alternation, or the judgment that one of these phonetic relations is closer than the other” p. 32.

Nunation:

As explained in chapter 3, nunation is “indefinite nouns and adjectives in the absolute state, that is when they are neither governed by the definite article (ال) nor in the construct of possessive case end in a nun (n)” (Farayha, 1958, p.173). In other words, it is adding a special sign (ٓ, ٔ, or ٪) at the end of the word, which specifies that that noun is grammatically non-definite.

Because some words cannot be nunated and because nunation has exceptions, students substituted the word endings. For example, the word “ظلم” to be nunated, should be written “ظلماء” but was found in dictation samples nunated as “ظلماء” with the insertion of the letter “ن”, or nunated as “ظلماء” where an additional letter should be inserted at the end. Therefore, 10% of the students inserted “نون” instead of the “nunation”, and 28% used the non-conventional insertion of the “nunation.”

Another sound substitution was related to vocalization. The sound “ن”, for example, in the nunated word is not vocalized when paused, which may make the word sound different. For instance, the word “أكلان” when paused is vocalized as “أكلان” which can be heard as “أكلان” (she eats), or “أكلان” (he eats), which are different kinds of words. This invention occurred in 4% of the students work.
2) Grammatical Level

Hamza Combined with a Vowel:

Only 5% of the dictation samples show that students had spelling invention difficulties mastering the hamza combined with a vowel (أ، و، ي) in the middle or the end of the word. Students should be aware spelling rules of ‘‘hamza’’ to able to decide whether to write it at the beginning, middle, or the end of the verb or noun.

The Definite Article:

Sixth grade students had spelling inventions with the definite article (ال: l) where some letters are written but not vocalized. Dictation samples revealed that students (11%) omitted the letter ‘‘lām: ل’’ after the first letter "ālif:али" when inserting the “Al” ash-sh-shamsiya to these words when using a word starting with any of the sun letters (ن ض ط ض). For example, one of the students wrote "إب ح خ ل غ ف ك ل م ه و ي" instead of writing "إب ج ح خ غ ف ك ل م ه و ي". Al Al-qamariya, on the other hand, did not cause a substitution in spelling because when using words starting with “moon” letters (ب ج خ خ غ ف ك ل م ه و ي) the definite article is vocalized as explained in chapter 3. Writing the definite article (al) conventionally requires the knowledge that when the definite article precedes a sun letter: 1) graphically loses the "sukūn" and the first letter of the word becomes doubled, and 2) the pronunciation: the "ل" of the definite article is absorbed by the first letter of the word, which will be pronounced, as a result of this absorption, doubled. During dictation students, they should have a previous knowledge that even if some letters are not pronounced they are preserved in writing. This suggests that the students pay attention to
phonological features when they are articulated but not sure of the conventional spelling to use when the sound (l) of the definite article (al) is not vocalized.

3) Orthographic Level

**Dents:**

Letters’ dents are of great importance in written Arabic language because they help in determining the boundaries of the letters across the word ( ﻫـ ﺖـ ﻕـ ﻙـ ﺪـ ﺪـ) as explained in chapter 3. The findings of the dictation samples showed that insertion or deletion of dents occurred only 3%, which suggest that students by sixth grade were aware of how dents are used.

**Orthographic Similarities across Some Letters:**

Orthographic similarities across some letters were found to cause another kind of spelling invention in students’ dictation. Even though this kind of spelling invention rarely occurs among sixth grade students, some inventions were noticed. For instance, replacing “dāl: ـ” with “dhāl: ﻖ” or vise versa occurred 4%. From my point of view, there is a possibility that the dot over some letters is omitted or inserted due to rushing and is not a substitution. Surprisingly, students (18%) replaced the letters “lām: ل” by “nūn: ﻥ” at the end of the word and also replaced nūn by lām. By extending the dent of the “nūn” and merging the dot, the letter “nūn” may look like “lām” such as writing “ن经纬: bees” instead of “ل经纬: we”, or shortening the stick of the “lām” that looks like a “nūn”. In other words, these may be issues of handwriting clarity not a spelling issue.
Spelling Inventions That Did Not Occur In Students’ Dictation Samples

There are spelling inventions that did not occur in dictation. On the phonological level, replacing “tied tā’ (ت،ت) with hā’ (ه،ه)”, spelling inventions caused by the sounds similarities of ḥā’ (حاء) and hā’ (هاء)” and “ṣād (ص) and šīn (س)”#, indeterminate words, and dialect forms did not occur in students’ dictation. On the grammatical level, syntax types, conjunctions, the insertion or deletion of the definite article (ال), and substitution of prepositions did not occur. In the orthographic level, many of the sub-types did not occur, such as “rā (ر) and dāl (د)”, “zā’ (ز) and dhāl (ذ)”, “ayn (ع) and ǧayn (ج)”, “nūn (ن) and zā’ (ز)”, and “fā’ (ف) and qāf (ق)”, which will be discussed later in research question 3. The reasons behind the absence of these spelling inventions are circumscribed by the dictation text itself since these spelling inventions types were not available in the particular dictated text.

Teachers’ influence on students’ performance in dictation cannot be ignored, because the teacher mediates between the text and the students. In addition, limiting teaching spelling rules to the dictation class only prevents students from practicing a wide range of spelling in authentic writing and authentic use of the language.

Research Question 2

What are the most common spelling inventions among UAE sixth grade students in composition?

Students’ compositions provide teachers with greater opportunity to detect different kinds of spelling inventions that may not occur in dictation and as a result teachers are able to witness academic development and maturity in reading and writing. Composition
allows students to solve problems, adopt and defend specific perspectives, reflect on personal values, experiences, goals, and ideals, and summarize ideas. Students are obligated to write in standard Arabic language with conventional grammar and compose meaningful texts.

Table 5.1 reveals that spelling inventions in compositions’ (CMP) occurred more often than in dictation (DCT). Counts show that only three spelling inventions, which appear in dictation, do not exist in composition. This means that the context of composition provided writers with opportunities and independence in word choice and text construction.

1) Phonological Level

Hamza:

A) Hamzatul- Fasl (أ،أ)’ and “Hamzatu- al Wasl (أ):

Arabic words cannot start with a vowel-less consonant. Hamzatul-wasl has been added to words that start with 2 consecutive consonants and is characterized by: 1) It is written without a hamza, and 2) Hamza is pronounced at the beginning of utterance only, otherwise it is dropped (Arab Academy, 2006). Spelling inventions in this context occurred with 60% of the students. The writing of hamza was left out as in these examples, (إنزل، إِرْكَانِ الْإِسْلَامِ، إِفْطَرْتُ، إِمَانَة، إِن، إِنسان) and inserted to hamzatul-wasl, where no hamza is needed, in (لَذٰٰٰنَُ، إِفْرُشَة، الْآخَرِين، آنَاس).

B) Hamza above or below Ālif (ا):

The letter Ālif (ا) is always carrying a hamza and the hamza sound is always pronounced in hamzatul-fasl. Nine percent of the students wrote the Hamza randomly
above (۰) or below (۱) “۱۰۲۰۱۰” “۱۰۳۰۰۱”. For instance, the word “۱۰۳۰۰۱ ۱۰۳۰۰۰۱” to wait for” was written as “۱۰۳۰۰۰۰۱ ۱۰۳۰۰۱ ۱۰۳۰۰۱ ۱۰۳۰۰۰۱” instead of “۱۰۳۰۰۰۱ ۱۰۳۰۰۰۱ ۱۰۳۰۰۰۱: the human”, etc. Tolchinsky and Teberosky (1998) conducted a study with preschool and second-grade Spanish and Hebrew children and found that when children think about the written codes they construct a fundamental basis for more abstract segmental units. This suggests that students are aware that hamza should be written with the letter (۱) but are not sure if it should be written above or below the letter which is a small segment of a whole word. That suggests that sixth grade students were familiar with a large number of letters, since they got the whole word spelled conventionally except for hamza.

Substitutions of Open Tā’ and Tied Tā’:

The substitution of the “open tā’” (۱۰۳۰۰۰۱) and the “tied tā’” (۱۰۲۰۰۱) is another spelling invention. Twenty four percent of the six-grade students substituted “tied tā’” for “open tā’” in their compositions. For instance, a student wrote “۱۰۳۰۰۰۱: shortage” with open tā’, where the correct word should be written with tied tā’ as “۱۰۲۰۰۱: قلة”. Replacing “tied tā’” with “open tā’” also occurred as in “۱۰۳۰۰۰۱: طاعة الوالدين” instead of the “۱۰۲۰۰۱: طاعة: parents obedience”, and “۱۰۳۰۰۰۱: فرشة” where the standard Arabic is “۱۰۲۰۰۱: فرشة: brush”.

Substitutions of Tied Tā’ and Hā’:

Eighteen percent of the students substituted “tied tā’” (۱۰۲۰۰۱) and “hā’” (۰۱). Both expressions are written similarly, except for the dots over the “hā’” that make it a “tied tā’”. Examples of this kind of spelling inventions were, “۱۰۲۰۰۱: فرشة” written instead of “۱۰۳۰۰۰۱: فرشة: brush”, “۱۰۲۰۰۱: طاعة” instead of “۱۰۳۰۰۰۱: طاعة: obedience”, and “۱۰۲۰۰۱: شوكولايى” instead of “۱۰۳۰۰۰۱: شوكولايى: chocolate”. Even though all these inventions sound exactly the same when pausing,
writing words ending with “hā’” is not conventional. This spelling invention means that before children can write conventionally, they begin to analyze phonological components of words, which can be reached through writing attempts according to Ferreiro and Pontecorvo (1999).

Substitutions of Vowels and Miniatures:

Substituting vowels and their miniatures (diacritical marks) occurred in composition. Fifteen percent of the participants substituted the vowel “Ālif” and its miniature “fat-ha”. For example, a student wrote “"الألعاب: the games”, “الحلويات: the sweets”, and “بركة: blessing”. Eight percent of the participants replaced the vowel wāw (و) by its miniature dhamma (الضمة) as in “"نقل: you are saying”. Substitutions of the vowel “ي” and its miniature “kasra” also existed (10%) as in “"إِي: right guide” and “"أسنانك: your teeth”. As explained previously in this chapter, this spelling invention had phonetic basis, and children are representing writing with sounds.

Sound Similarities:

A) Sound Similarities across Letters:

Sound similarities across letters are another kind of invention that occurs in students’ composition. The letter “ذ: ض” and “ذ: ظ” represent sounds that I found are most substituted by students (8%). For instance, “"نضافة: neatness”. Another substitution (3%) was between the letters of “"س: ص” and “"س: ص” as in “"المسلمون يبدلون التراويح: Muslims entertain al-taraweeh” where she meant “
Muslims pray al-taraweeh; even though both words sound similarly and are found in standard Arabic vocabulary, each of them has a different meaning and spelling. The sounds reported by the letters “ح” and “ه” were substituted by (3%) of the participants as in “طعام السحور” instead of “طعام السحور: late dinner eaten for fasting”. The same word “تهجر: having a late dinner for fasting” was invented as “تهجر”. In addition, the substitution between the sounds represented by “ص” and “س”. In composition, the underlined letter sound “ت” was substituted for “ت: Al-taraweeh prayers”. One student substituted the letter “ك” for “ق”. However, no spelling invention was found in which a student substituted the sounds “ف” and “ث”. Generally, these spelling invention occur less than 10% in students’ compositions, which suggests that in composition, students are engaged in producing meaningful texts that goes beyond the phonological aspect of the language.

B) Sound Similarities among Words:

I found that sound similarities among words was invented by only one student in their composition, for example “الإنسان: the human being” and “الأسنان: the teeth.” This same substitution was invented by 3 students (4%) in dictation, which suggests that it is not a frequent spelling invention among sixth grade students. This may occur because that in dictation students relied heavily on listening, while in composition students used their knowledge of written orthography and awareness of grammar rules. In addition, the
occurrence of some sound similarities represented by different letters may reflect the
dialect form of the Arabic language of both the teacher and the writer.

Nunation:

Insertion of the “nūn: ﷲ” instead of nunation (ـ ـ) does not exist in composition
samples. However, 19% of the compositions had a non-conventional insertion of
nunation. For example, “ظلمًا” was written instead of “ظلمًا: oppressive”. This data show
that these sixth grade students expect that spelling will reflect what they hear, and the nūn
sound represented by the nunation sound is distinct.

Indeterminate Words:

Indeterminate words mean ambiguous words that were not written conventionally
but I was able to understand them using the context clues. Six percent of the students
invented indeterminate words. I found that indeterminate words in students’ compositions
were produced for two reasons:

1) Students apply oral language’s vocabulary or sounds to the written language, as
in “شهر رمضان شهر مساحة ولاهي الكذب: The month of Ramadan is the time to forgive each
other and (indeterminate word) lies”. From my experience as a teacher, I assume the
writer wanted to write “ وليس للكذب: and not for lying” but she invented a new word “اللذي
” to denote the meaning of “لا
”.

2) Students attempt to write a standard Arabic vocabulary but produced an
indeterminate word that shares same sounds and orthography with the standard word, as
in “إن الله ينهانا عن الاستياء: God forbids (indeterminate word)” mostly the indeterminate
word “الاستياء: cruelty”. Even though six percent is not a high
percentage, it suggests that when kids are substituting one word for the other, they are constructing their own way of representing the same information or inventing for their own purposes. Students’ inventions with indeterminate words can be speculated from context and supported with a sound similarity of a conventional word. Students’ learn language and see print everywhere and not only at home. Children are surrounded with prints and symbols which help them develop the meaning and the function of print as Altwerger and Goodman (1990) assert. Therefore, children are surrounded with rich environment where they can read and acquire information and not necessarily know how to write them down. From my point of view, this kind of spelling invention is very important since it shows how children make sense of the sound-letter relationship. These indeterminate words represent most sounds of standard words which indicate that phonetic properties are very important for children in writing (Read, 1986).

**Dialect Form:**

The use of a dialect form instead of the standard Arabic vocabulary was another kind of invention (8%). Some of these forms included: “ٌالمطور” instead of “الدين” “the pious”; “نضحك” instead of “نضحك على من ليس له أسنان” “we should not laugh at toothless people”; “ترشيش الأسنان مهم” instead of “نظف الأسنان باستخدام الفرشاة” “cleaning our teeth is important”. Moreover, one participant wrote: “لا تكثر من تناول الحلويات لكي يخرب أسنانك” “don’t eat too much sweet because they will ruin your teeth” the word “ لأنه” means “because” in the UAE dialect form and should be written “لأنها” instead. Another example is the word “الشهر رمضان” instead of “أكتاب الموضوع: Because it is the month of Ramadan, I am writing this composition” where the word “حق” is a dialect form and the conventional sentence would be “لشهر رمضان أكتب”. 
As discussed in chapter 3, standard Arabic is the form of language used in school and in the public media but not in students’ daily communication. Shifting from the dialect form of Arabic to the standard form requires knowledge of conventional standard Arabic vocabulary, grammar, syntax, and sounds. Treiman (1998) considers that children's invented spelling may facilitate their acquisition of the alphabetic structure of writing in addition to metalinguistic reflection about speech, or a dialect, and its influence on writing.

2) Grammatical Level

Hamza Combined with a Vowel:

As explained in chapter 3, if a short vowel precedes, the hamza is written over the letter (ālif, wāw, or yā’) corresponding to the short vowel, otherwise (i.e. long vowel, diphthong or consonant preceding), the hamza is written on the line. In other words, hamza should be written over a vowel that represents a long sound of a short vowel that precedes, for instance if the short vowel (oː’ : dhamma) precedes hamza, the hamza should be written over a long vowel (u: و: wāw). Adding hamza to a vowel that does not represent the short vowel preceding hamza occurred by 18% of the students. For instance, one of the inventions was “من عطاءهم” where the underlined hamza should be written on a seat (ن) as “من عطائئهم” according to Arabic grammar. Another example was the insertion of hamza above the vowel “wāw” as in “حذاء من الرياح” where the writer meant “بأذن” to allow” instead of “بأذن “to call for prayer”. Another invention that reflected students’ substitution of “Hamza”
rules was one on a seat as in the word “متلما” he is in pain” which should be written on a line as “متلما” instead.

The Definite Article:

The use of the definite article “ال” was another kind of spelling invention found in compositions. Insertion or deletion of the definite article was found in the writing of 23% to the six-grade students. Eminent man in Arabic does not require an insertion of the definite article “ال” as in “The Ramadan: رمضان”. Another example of the same kind of invention is “لا أكسر السناني: I don’t break my (the) teeth”. Deletion of the definite article also occurred, as in “يفرح المسلمون بشهر رمضان كريم: Muslims are happy with blessed month of Ramadan” where the adjective “كريم: blessed” should have the definite article (The blessed month).

The spelling rules of the definite article “Al-Ash-shamiya” and “Al-Alqamariya” caused another type of spelling invention. In “al-Ash-shamiya” the letter “د” is written but not vocalized while it is written and vocalized in “al- alqamariya”. Among the composition samples, 19% participants invented the writing of al-alqamariya as in “التراويح، التحرر، التراحم” instead of “التراويح، التحرر، التراحم”.

Syntax:

A) Gender Wordings

As explained previously, Arabic has two genders: masculine and feminine. Adjectives, pronouns, and verbs agree with nouns in gender. This feature is present in all dialects of Arabic. For example, a sixth grade student had an invention in “إنها رمضان شهر "العبادة" where she used the feminine pronoun "انها “ instead of the masculine pronoun “إليه”
because “Ramadan” should be a masculine form. Another example of a gender wording invention was the sentence “ذهبت إلى الطبيبة لتفحص...” The verb “to check up: لتفحص” as the student wrote it starts with the letter “ت” which is used to begin verbs used with masculine subjects. In standard Arabic, the writer should write “تفحص” starting with “تاء: ت” which is used to begin verbs used with feminine subjects. Such gender wording invention was found in 20% of the composition samples.

B) General Grammar

General grammar’ syntactic inventions occurred 16% in the written composition samples. The non conventional syntactic plural, as in "ذهب المؤمنون" the underlined word was in the position of an “object” but should be the “subject: ذهب المؤمنون” the believers go”. Another example of grammar invention is the non-conventional dual as in "والوالدين" where it should be "والدينا: والدينا" parents” since a preposition “ب” precedes it. Adding an extra vowel (اَلْيِنْ) to the verbs, such as "أَدْعِيِّ: I pray” was written as "أَدْعِوا” which means you should all pray.” This was another example of grammar invention.

Another invention that is associated with grammar is the insertion of the letter “نِن: ن” to the conditional verbs. For example, a participant wrote about the month of Ramadan: "صومنا فتأخذون أجوركم: “where the second verb “فتأخذون” should not end with the letter “نِن: ن” because the sentence is conditional.

Since students had not yet been introduced to all the grammatical rules in sixth grade, I did not focus in depth on these inventions. For example, "أصبح محمد نبي: “instead of "أصبح محمد نبي“ Mohamed became a prophet”. Another kind of invention was related to
the compliance of the grammar of the noun and its adjective. Some word adjectives are represented differently than their nouns grammatically, for instance “صيام مقبول” where it should be “صيام مقبول”. Another kind of grammar invention was the use of the singular verb with the plural subject if the verb was located at the beginning of the sentence. Some participants use a plural verb with the plural subject as in “يبعدون المسلمون الله” instead of “يُعيد المسلمون الله”.

Conjugation:

The invented conjugation of nouns occurred in 15% of the compositions. For instance, the word “زيارات: visits” was invented as “مزاورات”. Another example of using the non-conventional conjugation of the noun was “في شهر رمضان علينا إخراج التصدقات المالية: صدقات” where the standard word “صدقات: charities” should be used instead of “تصدقات”. Another example of using the non-conventional conjugation was replacing verbs with the nouns or adverbs as in “لا تلعب: Do not play with your teeth if they are in pain” where in standard Arabic the conventional word should be “تؤلمك: hurts you” instead. Another use of the non-conventional conjugation was replacing adjectives with nouns as in “لا تستخدم الكلمات القبح: in Ramadan, never use bad words” where the convention sentence should have an adjective “بأسنانك إن كنت متنبلما: hurts you” instead. The opposite kind of invention where the students replaced a noun with an adjective was also found as in “لتحافظ على: to protect your teeth do not eat sweetie” where she meant “تأكل الحلوة: sweets”.
Writing compositions allows students to use a variety of words in different contexts. For example, some inventions occurred with the conjugation of verbs (10%) as in "the chewing gum ruins your teeth" where the standard verb is "cavities" and not "مَحَفرَة". In addition, replacing a conventional verb with an invented verb also occurred in "لا تكتُر مِن أكل الحلويات" do not eat too much sweets" where the writer invented the verb "تكتُر" instead of the conventional verb "تكتُر".

Substituting Prepositions:

The non-conventional use of prepositions appears in 9% of the compositions. Some inventions revealed that participants substituted the choice of the right preposition. For instance, the underlined words in the sentence are of non-standard use of the preposition أَصُومَ حَتَّى يُغْفِرُ لِي السَّيِّئَاتُ "I fast to erase all my sins.” Another invention found was "غَيْبَةُ مُعَجِّبٍ لَّكَ" where the right preposition in the sentence should be "ملك: your” and not “عليك: for you”. Moreover, there was an insertion of prepositions where no prepositions are conventionally written as in نحن لا نأكل اللحم في كسر “we don’t eat ice in breaking teeth:” where the student meant “Do not break your teeth by eating ice. “ These spelling inventions do not represent either Arabic standard or dialect forms.

3) Orthographic Level

Dents:

The insertion or deletion of the letter’s dent occurs extensively in sixth grade composition 15% of the time. In Arabic written language, it is conventional to spell the
word and its letters and dents accurately to denote the right meaning. Some examples of invented words with additional dents were "الإنسان"، "التراويح"، "الأيت"، "السنينات"، etc.

Orthographic Similarities across Some Letters:

Orthographic similarities across some letters occurred in writing compositions. Although most of the Arabic letters share high orthographic features as shown in Figure 3.1, these inventions were infrequent in most features occurring under 18% of the time. Some of the spelling inventions that neglected the dots or the dents result in having a non-intended letter. For instance, some students (4%) wrote “د:” instead “ذ:” as in “ذك:” he massaged” instead of “ذك:” that”. Omitting the dot of the letter د resulted not only in a spelling invention, but also in another standard Arabic word that did not fit the meaning of the sentence. A new spelling invention was found in sixth grade composition as it related to the orthographic similarities among words, such as "الإنسان” and “الإنسان".

In addition, composition samples revealed that 11% of the students omitted the dot of the letter “غ" which results in the letter “غ” instead as in writing “لعفر:” to dust” instead of “لعفر:” to forgive”. Insertion of a dot occurred above the letter “ف:” which resulted in the letter “ق:” in 6% of the composition samples as in “طعام القطور” “لعضا:” instead of “طعام القطور” “لعضا:”. Five percent of the participants deleted the dent of the letter “س:” that can be seen and read as “س" when written in the middle of the word as found in “شهر رمضان هو شهر العَوْم:” The month of Ramadan is the month of swimming” where she meant “شهر رمضان هو شهر الصوم:” fasting”.

Another example of an orthographic similarities invention was changing the letter form by decorating the letters or using specific fonts as in replacing the letter “ز:” in “
money almsgiving” with the letter “dhāl: د” in “نكافة المال”. This was found in 11% of the composition samples. On the other hand, the letter (ك) was written by 4% of the students as (ع) as in “إن رمضان شهر عزيم” instead of “بكرم” where the letter “kāf: ك” was replaced by the letter “ayn: ع”. Moreover, 11% replaced the letter “nūn: ن” with “zāï: ز”. To sum up, composition samples showed a variety of spelling inventions that reflects the nature of Arabic language orthography. In addition to other reasons given, these inventions also may be the result of speedy writing or focusing on meaning making rather than writing every word and letter in standard Arabic.

Punctuation Marks:

Punctuation marks were rarely used by students in composition. All the students in the three sixth grades left out commas, periods, and other needed punctuations which made their sentences long. The only punctuation found was the period at the end of the composition. I was able to determine where the sentences begin and end as the meaning changes even though punctuation marks were absent. According to Saenger (1995), punctuations are for the reader, the interpreter, to have a better interpretation of the text (Ferreiro & Pontercorvo, 1999). Ferreiro and Teberosky (1979) claim that punctuation appear in students’ writing when they are literate. Before that, children think of punctuations as marks that go with the letters but used as word separators and line end indicators (Edeskly, 1983). When children copy a text, they tend to disregard all the punctuations except for the question and exclamation marks. For elementary school children, it is difficult to approach the text as both readers and writers since they are still concerned with morphological, semantical and spelling aspects of the language more than
the use of punctuation. Another point to consider is that in all the composition pieces, no grades were given to punctuation, which makes it not a priority in writing. Regarding students’ use of periods only at the end of the text, Ferreiro & Zucchermaglio (1996) found that punctuation begins at the external borders of the text and proceeds towards the internal parts, which is the use of capitalization, in English and Spanish, and the period at the end of the sentence (Ferreiro & Pontecorvo, 1999).

Spelling Inventions That Did Not Occur In Sixth Grade Compositions

As analyzed above, all spelling invention types found in the three language categories occurred in sixth grade students’ compositions although most of them occurred occasionally. However, some sub-types that are mainly related to phonological level of the language did not occur, such as the substitutions of the sounds ñá’ and ñá’, and the insertion of nûn in nunated nouns.

Research Question 3

What are the spelling invention similarities and differences found in both composition and dictation?

There are many differences of spelling inventions found between the same writers’ dictation and composition. When students are given dictation, the teacher reads the grammatical rules, punctuation marks, and all the words needed to construct a meaningful text. However, in compositions students have to construct their own text, based on their own knowledge of words, grammatical rules, spelling rules, and how words are used in context. The text in compositions is longer than in dictation. In
compositions, students are given the chance to express and support their ideas and to expose parts of their personalities that make their pieces longer and authentic.

Statistically speaking, since I have two samples (one for composition and one for dictation) for every participant, I decided to compare the two sets of data even though there are differences in text length, word choice, and content. Due to these differences, some inventions occurred in sixth grade composition but not in dictation (See Table 5.1). These difference are seen in the features of insertion or deletion of the definite article (ال), conjugations of nouns or verbs, inventions associated with grammatical rules, inventions of indeterminate words, and dialect form.

Some spelling rules in Arabic reflect the writer’s knowledge of syntax. For instance, the orthography of hamza when combined with a vowel is not consistently based on hamza location in the sentence. In dictation, students do not have to think of grammatical rules before writing, because the entire text is orally presented by the teacher. Moreover, dictation texts are written by adults to evaluate students’ mastery of new spelling rules. Composition on the other hand, reflects students’ knowledge of spelling and grammatical rules, and vocabulary.

Most of the spelling inventions that occurred in dictation also occurred in composition, such as rules of Hamza, dents, “open and tied tā”, substitution of “tied tā” and “ḥā”, Al-Ash-shamshiya and Al-alqamariya, substitution of the vowel and its miniature, inventions of letters that shares orthographic or sound similarities. Even though these kinds of inventions occurred in both composition and dictation, there were
some differences. More explanations are provided below, based on the language level categories of phonology, grammar, and orthography (Table 5.1).

1) Phonological Level

Hamza:

The spelling rule that caused spelling inventions in both composition and dictation was the rule of Hamzatu-alwasl (_above) and Hamzatul-fasl (_<below>). In student’s dictation and composition samples, hamza was added or omitted non-conventionally. In addition, the silent sound (_above) in Hamzatul-wasl resulted in the deletion of the actual letter (_below). Substituting “hamzatu-alfasl and hamzatu-alwasl occurred in dictation more than in composition (8%). In dictation, students depend on hearing the text, which might be tricky for some students because of the silent sound of Hamzatul-fasl. The children's invented spelling indicates the development of an awareness of the oral segments of words as Treiman (1998) argues.

Substitution of Open Tā’ and Tied Tā’:

Dictation samples showed that 53% of sixth grade students substituted “open tā’: " and “tied tā’: ^ or ٠“ more often than in composition samples (24%). This high percentage difference was the highest among all inventions found in the results as shown in Table 5.1.

Substitution of Tied Tā’ and Hā’:

Surprisingly, another difference found (18%) of the students substituted “tied tā’: ٠ and “hā’: ِ or ِ” in their compositions. However, this was not found in dictation. Omitting dots of “tied tā’” is not limited to not knowing the spelling rule. It might also be
influenced by to a habit of writing tie (۫) without the dots (۪) or a focus on the meaning without focusing on getting every letter spelled conventionally.

Substitution of Vowels and Miniatures:

Substitution of vowels and miniatures was another source of substitution found in both composition and dictation. The percentage of students who produced such inventions was small. As Read (1971) explains, spelling of vowels is not easy to master because it represents segmentation and categorization in their “most difficult form” (Read, 1977, p. 3). The substitution of the three vowels and their miniatures occur in both dictation and composition. The substitution of “wāw: ۡو” and “dhamma: ۡذ” and “yā: ی” and “kasra: ۡز” occurred similarly with 8% and 10% for each invention type, respectively. The substitution of “ālif: ۡا” and “fat-ha: ۡف” occurred (5%) more often in composition samples. The large majority of the students have these features under control in both dictation and composition.

Sound Similarities:

A) Sound Similarities across Letters:

Sound similarities representing different letters also occurred in both compositions and dictation. Comparing the spelling invention in both contexts, students (25%) in dictation substituted the sounds “dād: ۡض” and “dhā: ۡظ”. Furthermore, dictation samples revealed that students substituted “fā: ۡف” and thā’: ۡث” (4%), “qāf: ۡق” and kāf: ۡك” (3%), and “tā: ۡت” and tā: ۡط”. Substitutions of the sounds “hā: ۡه” and há’: ۡه” and “sād: ۡس” and šīn: ۡش” were invented only in composition samples by 3% of the students for each, respectively. As mentioned, sound similarities that are represented by different
letters may produce a different spelling in dictation due to mishearing the word, words that make sense with both sounds, the teachers’ voices, class environment, students’ or teachers’ dialect and the non-awareness of the conventional spelling.

B) Sound Similarities among Words:

Sound similarities among words were found only once in composition samples. Therefore, the difference was in favor of the dictation samples (4%). When writing a composition, it is difficult to find such an invention, because writers think of the words ahead of time since they are the text constructors and the meaning providers. In dictation, students write what they hear regardless of meaning and that may result in replacing one word with another that sounds familiar.

Nunation:

Graphically nunation is obtained by doubling the sign of the ending vowel. Phonetically it's a light nūn added after the vowel. Insertion of the “nūn: ـن” instead of the nunation sign was invented by 10% of the students in the dictation sample with none occurring in composition samples. However, the non-conventional insertion was invented in both the dictation and composition samples with 9% more in dictation samples. Even if nunation was dictated, the way it should be written was not provided. Since adding nunation to the end of the word produces a “nūn” sound which is indicated by the sign without writing the letter nūn ـن, and since some words in Arabic ends with an original letter “nūn”, students have to pay attention to the words’ meaning and orthography to be able to distinguish whether the words end with nūn or a nunation sign. From my perspective, insertion of the letter nūn instead of the nunation sounds occurred in
dictation samples only because students pay more attention to writing every word conventionally rather than focusing on meaning. Since the students are not engaged in creating the text, such invention represents what students hear.

**Indeterminate Words:**

Indeterminate words were found only in composition samples with 6% of the total samples. Because the students had to choose words to construct their texts, their choices revealed their knowledge of Arabic vocabulary.

**Dialect Form:**

Dialect forms occurred exclusively in 8% of composition samples. Since in composition writing students used their knowledge of vocabulary and word sounds, many dialect forms replaced the standard Arabic vocabulary. Composition reflected students’ knowledge and use of vocabulary and the ability to distinguish standard vocabulary from the dialect form. As explained in chapter 2, there are many dialects in Arabic and standard written Arabic is no one’s oral dialect. Chomsky and Halle (1986) argued that children’s spelling inventions reflect lexical forms used in their daily speech. In that, students employ the information that they know and use daily about Arabic language when constructing a written text. Since the dialect form of Arabic language is the form students use for communication, it is expected that their dialect should influence their writing. Because the dialect influence on invented spelling is important in this study, I also discuss this issue in chapter 2 and chapter 5.
2) Grammatical Level

Hamza Combined with a Vowel:

In composition samples the “combined hamza with vowel (اء،،ء)” occurred 12% more often than in dictation samples. The “hamza above ālif (اً) or below ālif (أ)” found a similar occurrence in both samples studied with 1% greater difference in dictation. There was a possibility that students who made the hamza inventions in dictation samples were the same as those who made the same inventions in composition samples, however since the participants were anonymous, there is no way to check this.

The Definite Article:

In dictation samples, insertion or deletion of the definite article “ال” was not present. On the other hand, 23% of the composition samples had this spelling invention. Another spelling invention that was related to the definite article was the substitution between “al-Ash-shamsiya” and “al-alqamariya.” This feature occurred mostly in composition samples with a difference of 8%.

Syntax:

A) Gender Wordings:

There inventions related to syntax include the gender wording invention and other grammatical inventions. There occurred only in composition samples, with a percentage of 20% and 16%, respectively. The genders in Arabic are usually referred to as masculine and feminine, but the situation is more complicated than that because the two genders are expressed in standard Arabic by pronominal, verbal and adjectival agreement. These agreements are not necessarily found in colloquial Arabic.
B) General Grammar:

The written compositions reflect students’ knowledge of Arabic grammar. Even though words were written conventionally, the construction of the sentences was non-conventional in some compositions. Non-compliance of the verb with the number of subjects, the non-grammatical construction of dual subjects (المثنى), and the non-grammatical construction of plurals are some examples. Since students in dictation were not required to construct their own text, no grammar inventions were found.

Conjugation:

The freedom in choosing vocabulary in composition resulted in some students replacing non-standard conjugations of a word. Samples revealed that names were replaced by invented nouns, verbs, and adjectives. In addition, verbs were replaced with another verb or noun. The conjugation of noun inventions and conjugations of the verb inventions were written by 15% and 10% of the students in their compositions, respectively. At this grade, and according to the teachers’ guide, students were not obligated to know the conventional conjugation of the words. The large percentage of students who used these forms conventionally reflected their courage to guess the right conjugation as well as their knowledge of Arabic. This kind of invention should be respected and encouraged.

Substituting Prepositions:

Prepositions were not used conventionally by 9% of the students in composition samples. Even though there were no particular prepositions that were substituted, the students replaced prepositions in place of each other throughout the composition text.
Alternatively, the chance of substituting prepositions in the dictation samples was null since prepositions were provided in dictation. The conventional use of prepositions required the knowledge of preposition meaning, the knowledge of the structure of Arabic sentences, and the knowledge of how prepositions should be used which can be detected from composition. Since the use of prepositions are almost the same in all forms of Arabic language, the non-conventional replacements of preposition does not reflect student’s dialect form. From my point of view, this kind of invention occurred because students are heavily engaged in meaning making and creating a text so they do not pay attention to every word they wrote. When students are engaged in producing a text, they become busy planning, monitoring, revising and evaluating their pieces (Bereiter & Scardamalia, 1987).

3) Orthographic Level

Dents:

Insertion and deletion of dents occurred more often in students’ compositions than in dictation samples with a difference of 13%. An explanation for this may be that in dictation, students put all the attention in writing every word accurately since the meaningful text was provided by the teacher, while in composition students were busy with their own meaning making, writing style, and constructing sentences in addition to spelling. This result does not negate dents in other dictation pieces. The nature of the dictated pieces and spelling rules teachers wanted to evaluate played a major role in kinds of spelling inventions that occurred.
Orthographic Similarities across Letters:

Orthographic similarities across letters were written by more students in the composition samples than in dictation samples but with some differences. For instance, in dictation samples, substitution of the following types of spelling inventions were not written by any students (‘‘rā: ر’’ and ‘‘dāl: ٌ’’, ‘‘zāː: ز’’ and ‘‘dhāl: ذ’’, ‘‘āyn: ع’’ and ‘‘ğayn: غ’’, ‘‘nūn: ن’’ and ‘‘zāː: ز’’ and ‘‘fāː: ف’’ and ‘‘qāf: ق’’), while they were written by students in composition samples with the following percentages (8%, 11%, 11%, 11%, and 6%), respectively (See Table 5.1). Four percent of the students substituted the letters ‘‘dāl: ٌ’’ and ‘‘dhāl: ذ’’ in both composition and dictation samples. In composition samples, 5% of the students substituted the middle letters of ‘‘āyn: ع’’ and ‘‘ṣād: ص’’ in composition samples and only 1% in dictation samples. Substitution of ‘‘āyn: ع’’ and ‘‘kāf: ك’’ occurred (3%) more often in students’ composition than in dictation. A more remarkable difference was students’ substitution of ‘‘lām: ل’’ and ‘‘nūn: ن’’ at the end of an Arabic word which occurred more often in dictation samples (16%).

I believe some spelling inventions that were associated with letters that shared orthographic similarities reflected students’ rushing to complete their compositions more than non-awareness of Arabic orthography. The support for this claim is the same invention was not consistent throughout the text. This suggests that students pay less attention to some orthographic features of the language as they are constructing meaning.

Punctuation Marks:

Some writing features that were not directly related to spelling occurred in composition samples. For instance, long running sentences were found in all of the 80
composition samples. This may be due to the lack of use of punctuation marks. In dictation 100% of the students wrote the conventional punctuation marks because the teachers dictated them. In composition, on the other hand, students had to write punctuation marks conventionally in proper places in the text. One hundred percent of the students inserted the period at the end of their composition texts, but none of the students used any marks within their composition texts. The use of punctuation marks should be explained to students that they are used to compensate the lack of intonation and to “define the status of the sentence we write” (Waugh, 1998. p. 14). If students are dictated the punctuation marks and not given the chance to use them in their authentic writing, they will not understand their importance in writing especially if they are not evaluated as found in composition samples. This phenomenon is interesting and should be investigated in future research. Further information about children’s’ awareness and acquisition of punctuation marks was discussed in chapter 3.

Research Question 4

What strategies do the UAE sixth grade students’ report they use when standard spelling is unknown?

I interviewed twenty students to discover the strategies they use when conventional spelling was unknown. Students provided some overlapping answers about the strategies they used when they were dictated to or in their writing of compositions. Some students responded with more than one answer to the same question. Therefore, the percentages shown below are out of 100 for each alternative and not for all the alternatives of that question. This section is organized in the order of the interview
Questions (See Appendix B). I analyzed interview questions not in the order of the interview itself, but according to the issues these questions represent.

Strategies Students Use for when They Are Unsure about Spelling Conventions

When children encounter a difficulty and find their inventions different than what family and teachers call convention, they experience disequilibrium. As a result, there are many strategies students use to ease the tension. Asking the interviewees a direct question about strategies they would use when it comes to a difficult word during dictation or composition, students presented eight different strategies. They reported that some of these strategies were used more often in dictation than in composition, and vise versa.

Table 5.2 represents the number of students and percent of the response in group. They are listed in rank order first to eight. In Tables 5.2 and 5.3, (N) represents the number of students who chose that strategy and (%) is the percent of students divided by the total number of interviewees (20). Table 5.2 shows what strategies students reported using in dictation when it comes to difficult words, and Table 5.3 shows what strategies the same interviewees reported using in composition.

Table 5.2: Strategies Students Report Using When It Comes To Spelling Difficult Words in Dictation.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Strategies Students Used in Dictation:</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sounding Out</td>
<td>13</td>
<td>65%</td>
</tr>
<tr>
<td>2</td>
<td>Ask for help</td>
<td>9</td>
<td>45%</td>
</tr>
<tr>
<td>3</td>
<td>Think hard and visualize</td>
<td>5</td>
<td>25%</td>
</tr>
<tr>
<td>Rank</td>
<td>Strategies Students Used in Composition:</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>------</td>
<td>--------------------------------------------------------------------------------</td>
<td>----</td>
<td>-----</td>
</tr>
<tr>
<td>1</td>
<td>Try different writings and choose what looks correct</td>
<td>9</td>
<td>45%</td>
</tr>
<tr>
<td>2</td>
<td>Think hard and visualize</td>
<td>8</td>
<td>40%</td>
</tr>
<tr>
<td>3</td>
<td>Ask for help</td>
<td>8</td>
<td>40%</td>
</tr>
<tr>
<td>4</td>
<td>Sounding Out</td>
<td>7</td>
<td>35%</td>
</tr>
<tr>
<td>5</td>
<td>Revisit the difficult words</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>6</td>
<td>Apply the spelling rules</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>7</td>
<td>Apply the spelling rule of similar words.</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>8</td>
<td>Ask for repetition</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

Table 5.3: Strategies Students Report Using When It Comes To Spelling Difficult Words in Composition.

“Sounding out” is the first strategy used in dictation by 65% of the interviewees (first rank) compared to 35% in composition (fourth rank). The second rank strategy used in dictation is “Ask for help” and was used by 45% of the interviewees compared to 40%
“Think deeply and visualize the word” strategy took the third rank in dictation (25%) and the second rank in composition (40%). The students use this strategy more often in composition than in dictation.

“Revisiting the difficult word” was used by 25% of the interviewees in dictation (ranked fourth) compared to 15% in composition. The fifth ranked strategy in dictation writing (15%) was “Try different writings and choose what looks correct” was found to be the most frequent strategy used in composition (45%). The sixth ranked strategy in dictation and composition is to “Apply the spelling rules”. The seventh strategy was restricted to the dictation setting was “Ask for repetition” strategy and mentioned by 10% of the participants. The least used strategy in both composition and dictation was “Apply the spelling rules of similar words”.

The interview revealed that the students said they used similar strategies in all the classrooms. They applied these strategies with different preferences according to whether they were in a dictation or composition setting. While in dictation students drew heavily on sounding out, they had alternative strategies and provided the best spelling attempts. In both dictation and compositions, students depended highly on the teacher, classmates, or a family member asking for help. The least favored strategy in both kinds of writing was applying spelling rules to similar words.

Spelling Role Model

In regard to the third interview question “Who is a good speller you know?” 55% of the sixth grade students viewed a relative (sister, brother, father, cousin, etc...) as a “good speller”, while 45% responded with a non-relative (teacher or a student). I asked
the students about the features of “good spellers.” From the students’ point of view, 35% agreed that “good spellers” were those who “work very hard on their writing and try to improve it.” “Writing extensively” was the second important spelling feature agreed on by 25% of the participants. “Regular study of spelling rules” and “reviewing spelling rules” was two features of similar importance (20%). “Paying attention in the classroom” and “reading books” were two features suggested by 15%. Less preferred features were: “having clear handwriting” and “thinking deeply” with 10% for each. Five percent of the responses included: “Having a rich vocabulary;” “having acceptable listening skills;” “sounding out;” “ability to simplify spelling rules;” “understanding spelling rules;” and “writing all the words conventionally”.

In the first two interview questions, I analyzed what strategies students reported they would use when they were unsure about conventional spelling. In this interview question, I wanted to investigate strategies “good spellers” would use when conventional spelling is unknown. Analyzing students’ answers revealed they believe that “good spellers” used some strategies such as spending more time on additional readings and writings. Moreover, “good spellers,” from the interviewees’ point of view, did not depend on sounding out as the main strategy when it came to spelling, even though they drew heavily on sounding out in dictation (65%) and in composition (35%) in response to the first research question.

As students reported some features of “good spellers” signified problems some students suffered. For instance, one of the students reported that she thought that her classmate was a “good speller” because she acquired the new spelling rule quickly and
had a better understanding than she herself had. Another important issue that I found was that despite the students’ knowledge of the features of “good spellers,” they do not necessarily use them. For example, as students reported, 35% of “good spellers,” worked hard on their spelling, while (40%) would ask for help.

Ninety percent of the sixth grade students thought that “good spellers” never came to a word they did not know how to spell when writing, while only 10% did not agree. Students thought of different strategies that “good spellers” might use when they came to something they did not know how to spell. Regarding these proposed strategies, students thought that “good spellers” used “ask for help” strategy (35%), and “provided their best attempts” strategy (20%). “Revisiting difficult words in the editing stage,” “applying spelling rules,” “applying rules of similar words,” and “hard work and study” were strategies that were preferred by (10%). “Imagination,” “Extensive reading,” “Used meaning clues,” and “Asked for repetition” were strategies preferred by fewer students.

As shown in Table 5.4, interviewees viewed “good spellers” spelling strategies distinguishably. “Good spellers” also worked very hard on their spelling as the interviewee reported. Working hard scored high: 35% percent of the participants reported that asking for help was not a shame and it was the role of the youngest to ask the eldest for the right answer and to benefit from his/her experience. Table 5.4 summarizes findings of students’ view of “good spellers” and the strategies they believe these spellers used when it came to new words or words they are not sure how to spell conventionally. For these words, interviewees used the term “difficult words.” It is interesting that sounding out was not the favorite strategy they reported “good spellers” used.
Table 5.4: Students’ Views of Strategies that “Good Spellers” Used in Spelling

<table>
<thead>
<tr>
<th>Rank</th>
<th>Strategies “Good Spellers” Used</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hard work</td>
<td>7</td>
<td>35%</td>
</tr>
<tr>
<td>2</td>
<td>Extensive writing</td>
<td>5</td>
<td>25%</td>
</tr>
<tr>
<td>3</td>
<td>Regular study of spelling rules</td>
<td>4</td>
<td>20%</td>
</tr>
<tr>
<td>4</td>
<td>Reviewing spelling rules</td>
<td>4</td>
<td>20%</td>
</tr>
<tr>
<td>5</td>
<td>Paying attention in the classroom</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>6</td>
<td>Reading</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>7</td>
<td>Handwriting</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>8</td>
<td>Thinking hard</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>9</td>
<td>Having rich vocabulary</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>10</td>
<td>Having acceptable listening skills</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>11</td>
<td>Sounding out</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>12</td>
<td>Ability to simplify spelling rules</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>13</td>
<td>Understanding spelling rules</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>14</td>
<td>Writing all the words conventionally</td>
<td>1</td>
<td>5%</td>
</tr>
</tbody>
</table>

Spelling Advice and Help Sixth Grade Students Would Provide to Peers

Sixth grade students responded that they might offer to assist peers who had spelling difficulties. There were several strategies reported by interviewees that they would advise their peers to use when it came to new words or words they are not sure how to spell conventionally. Three different strategies or advice agreed on by 25% of the
interviewee were: “Spell out the word,” “ask them to practice regularly,” and “start explaining easy spelling rules first.” Twenty percent of the interviewees would advise their peers to sound out the words. Fifteen percent of the interviewees thought that their peers should wait and “ask the teacher for help.” They would also help by locating and working with their peers on their areas of spelling difficulty (15%). “Practicing on extra spelling sheets, dictations, and compositions” was another advice provided by 10% of the participants. Five percent reported using different advice, such as “checking the original text,” “gradual teaching of spelling rules (letters, nouns and then verbs),” or “simplifying the spelling rules.” Table 5.5 shows students’ methods used to help their peers to overcome spelling difficulties.

Students reported that they had their own ways in communicating with each other and reaching their friends’ who need help in spelling. The interviews revealed that the teacher, from the student’s point of view, helped students with spelling difficulties in different ways. Even though asking for help was one of the favorite strategies students used in dictation and composition, none of the students thought that the teacher would help students by spelling out the words for them. Sixty-five percent of the interviewees thought that the teacher would “simplify spelling rules by providing extensive explanations and examples.” Moreover, 40% thought that the teacher would “provide additional dictations.” Ten percent of the participants reported that the teacher might provide a replacement test to locate the area of spelling difficulty,” and the same percent reported that they did not know the exact methods that teachers used to help students. Only 5% of the participants thought that the teacher would help with use of mini-lessons
to discuss spelling rules. In addition, 5% thought that the teacher would ask students to memorize the spelling rule and to sound out the difficult words.

Table 5.5: Students’ Strategies to Help Peers Overcome Spelling Difficulties

<table>
<thead>
<tr>
<th>Rank</th>
<th>Strategies</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Spell out the word</td>
<td>5</td>
<td>25%</td>
</tr>
<tr>
<td>2</td>
<td>Ask to practice regularly</td>
<td>5</td>
<td>25%</td>
</tr>
<tr>
<td>3</td>
<td>Understating easy spelling rules</td>
<td>5</td>
<td>25%</td>
</tr>
<tr>
<td>4</td>
<td>Ask to sound out</td>
<td>4</td>
<td>20%</td>
</tr>
<tr>
<td>5</td>
<td>Ask the teacher for help</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>6</td>
<td>Locating and working on the area of spelling difficulty</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>7</td>
<td>Practice on extra spelling sheets, dictation, and compositions</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>8</td>
<td>Check the original text</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>9</td>
<td>Gradual teaching of spelling rules</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>10</td>
<td>Simplifying spelling rules</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>11</td>
<td>I don’t know</td>
<td>1</td>
<td>5%</td>
</tr>
</tbody>
</table>

Teacher’s Strategies to Help Students with Spelling

Regarding the teachers’ role in spelling, the interviews revealed that the students recognized that the role of the teacher in spelling was not spelling out the difficult words for students even if they asked. Students were clear that their teacher would start by giving a replacement test; the teacher did not favor sounding out as the first strategy, and
would not tell the students the words they did not know how to spell. The teacher’s strategies, from the students’ point of view, were centered on working hard to help students understand the rules, and depended on the writers themselves more than waiting for outside help. Table 5.6 shows strategies students reported that the teacher used to help students in spelling. A spelling replacement test is an interesting issue to be investigated and studied in future research.

Table 5.6: Teachers’ Strategies as Reported by Students to Help in Spelling

<table>
<thead>
<tr>
<th>Rank</th>
<th>Strategies:</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Simplifying spelling rules</td>
<td>13</td>
<td>65%</td>
</tr>
<tr>
<td>2</td>
<td>Providing additional dictations</td>
<td>8</td>
<td>40%</td>
</tr>
<tr>
<td>3</td>
<td>Replacement test to locate areas of difficulty</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>4</td>
<td>I don’t know</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>5</td>
<td>Minilessons</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>6</td>
<td>Memorize spelling rules</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>7</td>
<td>Sounding out</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>8</td>
<td>Spell out the word</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

The interviewees reported different ways to help sixth grade students learn spelling. Fifty-five percent are thankful that their Arabic language teachers and some members of their families taught them the spelling rules. Awareness of the spelling rules was a great aid in learning to spell according to 25%. Moreover, regular practicing was
helpful according to 15% of the sixth grade students, along with additional reading suggested by 5%.

Student’s Views of Themselves as Spellers

Students had different views of themselves as spellers. Fifty-five percent of participants thought of themselves as “good spellers” while 30% did not consider themselves “good spellers.” Interestingly, 15% did not know how to evaluate their spelling level. Behind these self-estimations, there were different positive and negative reasons. According to the interview, the positive reasons that made them think they were “good spellers” at first were their class grades. For students, grades were considered the best indication of spelling proficiency according to 80% of the students. Ten percent of the students thought that regular practice made them “good spellers.” For 5% of the participants “good spellers” were writers who have: “positive self-esteem and confidence,” “understanding and awareness of spelling rules,” “paying close attention at school,” and “teacher and family support.” On the other hand, some students viewed themselves as poor spellers for the following reasons: 35% thought that the “Arabic spelling rules are extremely difficult and ambiguous” and 10% referred to their weakness as “lack of experience or practice.”
Spelling Proficiency in Different Contexts (Dictation and Composition)

Interview question 11 “Do you think that you are a better speller in dictation or composition” examines students’ preference in the context of writing. Table 5.7 shows what students reported they preferred and the reasons for their preference:

Table 5.7: Students’ Context of Proficiency

<table>
<thead>
<tr>
<th>Rank</th>
<th>Area of Spelling Proficiency:</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Composition</td>
<td>15</td>
<td>75%</td>
</tr>
<tr>
<td>2</td>
<td>Dictation</td>
<td>4</td>
<td>20%</td>
</tr>
<tr>
<td>3</td>
<td>Same</td>
<td>1</td>
<td>5%</td>
</tr>
</tbody>
</table>

Why Composition?

<table>
<thead>
<tr>
<th>Rank</th>
<th>Reason</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Freedom in expressing ideas</td>
<td>10</td>
<td>50%</td>
</tr>
<tr>
<td>2</td>
<td>Easy to find and exchange vocabulary</td>
<td>8</td>
<td>45%</td>
</tr>
<tr>
<td>3</td>
<td>Abundance of time</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>4</td>
<td>Ability to revise and edit</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>5</td>
<td>Dictation and composition are highly related</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>6</td>
<td>Ability to show one’s knowledge and readings</td>
<td>1</td>
<td>5%</td>
</tr>
</tbody>
</table>

Why Dictation?

<table>
<thead>
<tr>
<th>Rank</th>
<th>Reason</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Text already created</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>2</td>
<td>Teachers’ interference</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>3</td>
<td>I don’t know</td>
<td>1</td>
<td>5%</td>
</tr>
</tbody>
</table>
Even though students used almost the same spelling strategies in dictation and composition, they favored them differently. Seventy five percent of the students believed their spelling in composition to be better than in dictation. Their spelling was better in composition because they believed they have the freedom of word choice (50%), freedom to choose easier word alternatives (45%), the ability to express oneself more (5%), and extra time they had for writing and revision (10%). On the other hand, 20% of the students found their spelling better in dictation than in composition because they thought that dictation provided the entire vocabulary one needed to construct a text (10%). However, students who believe they were better spellers in dictation said that they had to think hard to create an entire text in composition. Another reason they were better spellers in dictation was because the teacher's help was available in dictation and not in composition. Five percent of the participants thought the writing genre did not influence the quality of writing.

The Importance of Conventional Spelling

Ninety five percent of the students believed they were better spellers in composition, thought that acceptable spelling proficiency was vital in all kinds of writing including dictation. Forty percent of the participants thought that conventional spelling was vital to write the words of their choice and that acceptable spelling was important to succeed in any writing genre. Sixth grade students reported several reasons that made conventional spelling important, such as conventional spelling is a cornerstone of any writing genre (25%); it helps the writer to use any vocabulary that she/ he wanted to use (25%); and better grades were reached by having conventional spelling (15%). Ten
percent of the participants thought that conventional spelling clarified the meaning of text and helped the writer express him/her self. By contrast, 5% thought that conventional spelling was not important since the reason for writing is expressing one's self. Table 5.8 summarizes students’ answers regarding the importance of conventional spelling regardless of context.

Table 5.8: Importance of Conventional Spelling in Dictation and Composition

<table>
<thead>
<tr>
<th>Rank</th>
<th>Conventional Spelling Is Important Because:</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Writer can choose any vocabulary to write</td>
<td>5</td>
<td>25%</td>
</tr>
<tr>
<td>2</td>
<td>Conventional spelling is a cornerstone of any writing genre</td>
<td>5</td>
<td>25%</td>
</tr>
<tr>
<td>3</td>
<td>To get higher grades</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>4</td>
<td>Express ideas and self easily</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>5</td>
<td>Clarifies what is written</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>6</td>
<td>The reader can benefit from reading clear texts</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>7</td>
<td>To reach the target of writing</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>8</td>
<td>Meaning is highly related to orthography</td>
<td>1</td>
<td>5%</td>
</tr>
</tbody>
</table>

Editing Dictation and Composition Texts

As explained in chapter 2, students have a specific time for dictation, composition, and editing their papers before turning them in to the teacher. In the editing stage, sixth grade students followed several strategies to edit their spelling. Some of the reported strategies were: revision (60%), sounding out (40%), and teacher’s response (15%). Other strategies listed by fewer interviewees for checking spelling were: applying
rules of similar words, checking diacritical marks, thinking deeply and imagining, and a high self-confidence level (5% each). Students reported that when they reread their writing, they would try to correct non-conventional spelling by: applying rules of similar words (10%), sounding out (20%), revision (30%), teacher’s response (20%), thinking deeply (15%), and the words’ orthography (10%). Five percent of the interviewees responded in each of the following: inability to understand what was written; applying spelling rules of the Arabic language, and having low grades. When sixth grade students spelled words non-conventionally, they erased and rewrote the misspelled word (95%), revised and thought deeply (10%), tried to remember the words’ orthography (5%), or waited for teachers’ assistance (5%).

Most Difficult Spelling Rules in Arabic for Sixth Grade Students

During the interview, students were asked about the most difficult spelling rules they face (See Table 5.9). Of these difficult spelling rules, 35% reported that “Hamza rules” were the most difficult, followed by the rule of hamza when combined with a vowel (30%). Long words (10%), forming verbs, nunation, substituting vowels with miniatures, and sound similarities among ŏdā and ŏhā were of spelling difficulties rules were listed by 5% of the students, respectively. Table 5.9 summarizes students’ choice of difficult spelling rules. In the following section of this chapter, I explain explicitly how student’s choices of difficult spelling rules were related to their performance in dictation and composition.
Table 5.9: Difficult Spelling Rules for Sixth Grade Students

<table>
<thead>
<tr>
<th>Rank</th>
<th>Difficult Spelling Rules</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hamza rules</td>
<td>7</td>
<td>35%</td>
</tr>
<tr>
<td>2</td>
<td>Rule of Hamza combined with a vowel</td>
<td>6</td>
<td>30%</td>
</tr>
<tr>
<td>3</td>
<td>Nothing</td>
<td>6</td>
<td>30%</td>
</tr>
<tr>
<td>4</td>
<td>Long words</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>5</td>
<td>Verbs</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>6</td>
<td>Substituting vowels and their miniatures</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>5</td>
<td>Nunation</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>8</td>
<td>Sound similarities among داء and ذاء’ (ء، ظ، ظ)</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>9</td>
<td>Dents</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>10</td>
<td>Tied and open تاء’</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

Students’ Strategies to Teach Spelling

If students pretended to be Arabic language teachers, they would teach difficult spelling rules by: teaching spelling gradually starting with the easy rule first (35%), providing additional revision and practice (30%), conducting minilessons (20%), following the instruction of the Teachers’ Guide (15%), asking students to memorize spelling rules (10%), and sounding out 10%. However, if students were to teach Arabic spelling rules in general, they would: teach spelling gradually starting with the easy rule first (40%), provide additional tests and practice (20%), minilessons (15%), provide extensive repetition and dictation of new words (15%), provide instant correction of
misspelling (15%), explain spelling rules slowly and explicitly (10%), provide frequent revision of the spelling rules (10%), sound out (5%), and ask students to memorize spelling rules (5%). Table 5.10 below summarizes students’ strategies to teach spelling if they were Arabic Language teachers.

Table 5.10: Students’ Strategies, Being Arabic Language Teachers, to Teach Spelling

<table>
<thead>
<tr>
<th>Rank</th>
<th>Students’ Strategies to Teach Spelling</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Gradual teaching of spelling rules</td>
<td>8</td>
<td>40%</td>
</tr>
<tr>
<td>2</td>
<td>Additional tests and practice</td>
<td>4</td>
<td>20%</td>
</tr>
<tr>
<td>3</td>
<td>I don’t know</td>
<td>4</td>
<td>20%</td>
</tr>
<tr>
<td>4</td>
<td>Minilessons</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>5</td>
<td>Extensive repetition and dictation of new words</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>6</td>
<td>Instant correction of misspellings</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>7</td>
<td>Frequent revisions of spelling rules</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>8</td>
<td>Explaining slowly and explicitly</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>9</td>
<td>Sounding out</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>10</td>
<td>Ask students to memorize spelling rules</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>11</td>
<td>Cooperating with parents</td>
<td>1</td>
<td>5%</td>
</tr>
</tbody>
</table>

Students’ Suggestions to Improve Their Own Spelling

Students were aware of several ways to improve their spelling as shown in Table 5.11. Fifty-five percent of the students thought that working hard and additional practice
were the best things to do to improve spelling. Students also reported additional
techniques such as: frequent revision of spelling rules can help to overcome difficult
spelling rules (20%); extensive writing (15%); asking for help (15%); and minilessons
(15%); paying close attention in the classroom (10%); extensive reading (10%)
memorizing spelling rules (95%) and sounding out (5%).

Table 5.11: Students’ Suggestions to Improve their Spelling

<table>
<thead>
<tr>
<th>Rank</th>
<th>Suggestions</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Working hard and practice</td>
<td>11</td>
<td>55%</td>
</tr>
<tr>
<td>2</td>
<td>Frequent revision of spelling rules</td>
<td>4</td>
<td>20%</td>
</tr>
<tr>
<td>3</td>
<td>Ask for help</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>4</td>
<td>Minilessons</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>5</td>
<td>Reading</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>6</td>
<td>Extensive writing</td>
<td>3</td>
<td>15%</td>
</tr>
<tr>
<td>7</td>
<td>Paying close attention in the classroom</td>
<td>2</td>
<td>10%</td>
</tr>
<tr>
<td>8</td>
<td>Memorizing spelling rules</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>9</td>
<td>Sounding out</td>
<td>1</td>
<td>5%</td>
</tr>
<tr>
<td>10</td>
<td>I don’t know</td>
<td>1</td>
<td>5%</td>
</tr>
</tbody>
</table>

Evaluating Students’ Dictations and Compositions

Evaluated and marked compositions and dictation pieces may influence how the
students understand their own inventions if they are not explained explicitly. Ninety
percent of the participants were satisfied with the way the teachers marked their writing
pieces, while 10% were sometimes satisfied and able to understand what the teacher meant with her corrections. However, if students pretended to be Arabic language teachers, they would use some techniques to make the evaluation of dictation and compositions more explicit, such as using right or wrong marks (40%), checking the original text (20%), explaining difficult misspelled words (15%), or using any other clear and explicit evaluation procedure (10%).

To sum up, there are some interesting issues I encountered when analyzing students’ interviews. The interviews revealed some spelling rules that sixth grade students struggled with and these were supported by the data analyzed in the first two questions which suggests that the students have insight into their own spelling difficulties. Following the same order of Table 5.1, Number and Percentages of Spelling Invention Categories in the Arabic Language, on the phonological level 35% percent of sixth grade interviewed students thought that “Hamza” types were the most difficult spelling rule. Their insights are in agreement with the high percentages of “Hamza” types found in the results from the samples collected, especially, the Fasl: ١ or ١١, and Wasl.

Substituting vowels and their miniature was reported by 5% of the interviewees, while 8-15% of the students used inventions with this particular rule in their dictation and composition writing. In addition, 5% of the interviewees reported that they had difficulty with nunation, while 10-28% of sixth grade students had nunation inventions. Students would not be aware that they had invented such a rule if this rule and their inventions were not discussed explicitly with the student.
Substituting the sounds of “ذذ و ذح” was reported by 5% of the interviewees as difficult rules, while 33% of students in dictation samples and 8% in composition substituted these sounds. I will explain this more in the following section.

Comparing what the students reported about their spelling inventions and actual data analyzed in research questions 1 and 2 suggest that students may have spelling difficulties with some rules but they are not truly aware that they have them.

Surprisingly, none of the interviewees mentioned the spelling rule of Tied Tā’ and Open Tā’ as a problem in spelling even though more than half the participants had spelling inventions with this rule.

On the grammatical level, 5% of the interviewees thought that verb conjugation was a difficult spelling rule. Composition samples revealed that this kind of spelling invention occurred by 15% of sixth grade students in their writing.

On the orthographic level, students did not report any problems with dents, punctuation marks, or orthographic similarities across letters.

There also were interesting findings regarding the strategies students reported they favored in spelling. I conclude this chapter by summarizing what I found:

**Sounding Out Strategy:**

Interestingly, even though 65% of students chose a sounding out strategy when it came to difficult words they could not spell; only 5% of the interviewees thought that it was a practical strategy in spelling. Throughout the interview, sounding out seemed to be students’ favorite choice, but the answers revealed that it was not the teachers’ way of
teaching, and it was not students’ choice when it came to advising other students, identifying “good spellers,” or improving their own spelling.

**Asking for Help Strategy:**

The interview revealed that the students depended heavily on the teacher, peer, or a family member for assistance with spelling. Even in learning to write, only 5% of the students thought they had learned to write through reading and writing and 95% believed they learned to write by depending on help.

**Discussion**

Interpreting spelling inventions results and interviews helped me, as a researcher and educator, to rethink spelling inventions and to explore what issues to consider when evaluating spelling in compositions, during dictation and other spelling environments, and in teaching minilessons. Studying invented spelling for older grades is valid spelling research. For instance, Templeton (1979) studied invented spelling of eighth and ninth grades also focusing on phonemic and orthographic awareness. As shown from the interviews I conducted, misspellings by writers in older grades did not reveal children who are not writers, but rather show that they are trying to employ their knowledge of how language works and to make sense as they write.

**Spelling Inventions and Conventions in Sixth Grade’s Samples**

Studying students’ samples, I found that the only spelling rules that students invented over 50% are the spelling rule of hamza and substituting open tā’ and tied tā’, which indicate that by the time students reach sixth grade they can control the Arabic
written text. It is fair to mention that students know about Arabic spelling more than what they do not know or had mastered yet. According to Table 5.1, most of the spelling inventions in both dictation and composition were 30% or less, which means 70% or more of the sixth grade students wrote the words conventionally. It is important to see students’ conventions and not to focus only on their inventions. Shifting the focus to students’ writing strength adds value and appreciation to their work, and makes the teacher rethink spelling instruction. Having faith in students’ writing achievements and spelling abilities, makes the teacher more confident to allow students to write spontaneously, and experience with language.

Spelling Inventions in Different Contexts

The findings showed that some of the spelling inventions occurred more in dictation samples than in composition samples and visa versa. Few inventions occurred evenly in both the composition and the dictation samples. Some of these inventions occurred with the students’ awareness of them as they reported during the interviews.

Both composition and dictation play different roles in teaching Arabic writing in UAE schools. In dictation, students’ practice the acquisition of particular spelling rules that they are supposed to avoid in composition. On the other hand, in composition students not only practice their knowledge of newly explained spelling rules, but all the grammatical, phonological, and morphological rules they have acquired throughout their lives.
Dictation:

When writing a dictation piece, students focused on writing every word conventionally; therefore, there were not many spelling inventions that were related to sentence construction, grammar, and conjugation. From my point of view, even though some methodologists like Davis and Rinvolucri (1988) view dictation as a powerful tool "Decoding the sounds of [English] and recoding them in writing is a major learning task" (p. 7), dictation cannot be used as an evaluation tool for children’s knowledge of grammatical or syntactic aspects of the Arabic language. Since dictation depends heavily on listening to their teacher, factors may influence students’ writing, such as the teachers’ dialect or tone, class environment, hearing problems, and being a slow writer.

Another important issue related to common spelling inventions among sixth grade students was that even though students were dictated to weekly, not all the chosen pieces reflected what the students had mastered in spelling. For example, after every few new rules students were tested by dictation on the mastery of these specific rules, which may neglect other spelling rules students learned during elementary school cycles.

There were big differences between the percentages (41% in dictation, 5% in composition) of students’ invented words that sounded similar to other words. An explanation for this was in dictation students were not sure about the words they were listening to since they were not the creators of the texts. Since the aim of dictation was writing every word accurately, students were focused on sounds more than the meaning of text. On the other hand, in composition, students choose the vocabulary they wanted to
use to denote the meaning. This made them more certain about the words they wanted to choose.

As shown from dictation samples, dictation does not provide enough information about what spelling rules students have mastered. In this research, there is only one word that starts with hamzatu-alwasl with a high percentage of spelling invention. That particular dictation piece does not allow the teacher to look insightfully at more words with the same invention because of the limitedness of the piece itself.

Many theorist like Piaget (1973) and Vygotsky (1978) believed that fearing to take risks may delay learning. In that, students’ asking for help strategy in dictation may result in dependent learners who fear to take risks.

**Composition:**

Composition, on the other hand reflected most of the Arabic language rules students mastered except for the difficult rules or vocabulary that students may have avoided. The most important finding of the research was that there were many more spelling inventions detected in composition than in dictation because students had a greater opportunity to write spontaneously. Limiting students to dictation reflected inventions of particular spelling rules only, while letting students write freely as in composition, revealed what students knew about the Arabic written language.

Regarding preference of genres, sixth grade students reported that they preferred writing a composition topic to writing a dictation piece, because they had much more space to express their ideas, greater control over their choice of vocabulary, and more control of time for editing. I believe that students focused on denoting meaning and
constructing a meaningful text in their composition writing rather than on getting every word spelled conventionally. Students seemed to be aware that spelling was not the purpose of composition and the higher percentages of spelling inventions in composition prove that.

From my point of view, even though dictation reflects students’ acquisition of a particular spelling rule, students may avoid using language that involves that rule in composition. Composition plays a role in encouraging written expression if students feel that their inventions are acceptable and respected. Both dictation and composition classes were assigned once a week, but as shown from findings, composition played a major role in indicating important issues about the student as an individual person and not simply as data for spelling evaluation.

Context like a composition allows children to deal with the fact that the teacher’s expectation exceeds conventional words, which allows them to explore language and deal with various writing problems on their way toward convention.

Dialect and Invented Spelling

Teachers’ dialects could be a factor in the occurrence of spelling inventions by students. Some Arabic sounds are not used in some dialects, such as the sounds represented by “ق” and “ض”. Even though the teacher’s dialect was not studied in this research, I want to mention all the possible influences for spelling inventions. Dialect is a very important issue in the discussion about invented spelling. Stever (1980) believe that children are dialect spellers (Read, 1986). Spelling is thought to reflect writer’s dialect at some extent at young ages (Wilde, 1992). Sullivan (1971) reported that spelling is
influenced by one’s dialect based on his research with African Americans (Read, 1986). O’Neal and Trabasso (1975) found that writers are dialect spellers only when it comes to unfamiliar words. Moreover, in 1976 the same researchers found that students move away from spelling representing the way they speak by fifth grade or by sixth grade as Graham and Ruddorf also (1970) noted.

Relating speech to print is natural in reading and writing as Treiman’s (1998) study reveals. Since public schools in the UAE accept only UAE students, they share the same dialect, which may be reflected in their spelling. There were many dialect forms found in students’ composition. I found no studies about the influence of dialect on UAE students’ writing. The use of dialect forms can be amazing and clever. When students use the words they use in their daily life they are employing meaning and ideas that they have in their language but may not be aware of the parallel standard Arabic vocabulary in writing. It was clear that the aim of composition was meaning making and not just forming words and creating sentences conventionally for the sixth graders.

Strategies Students Used to Avoid Spelling Inventions

To avoid some spelling inventions, students used some tricks found in students’ samples. For examples, the rule of nunation ends with sound of “n” without inserting the actual letter “n”. Some participants added both but with a tiny letter “n” at the end of the word. Another trick was associated with the rule of “open tā’” and the “tied tā’”. Some participants wrote the “tied tā’” in a way that was difficult for the reader to figure out which “tā’” was meant to be written. They did this by using Diwani font where “tied tā’” and “open tā’” are written about the same. All these rules students were trying to avoid
also reflect inventions and fall in the phonological level of the language as explained in Table 5.1.

Teachers’ Evaluation of Written Texts

In evaluating students’ dictation pieces, the teacher had the original text to refer to when needed, but in composition, the teacher had to deal with students’ inventions based on her knowledge of the Arabic written system in addition to her teaching experience. For instance, one of the participants wrote ""women gather to (indeterminate word) food” the word “" can be considered an indeterminate word and marked wrong, while using context clues and teaching experience, the indeterminate word was actually the word “" to cook” but the stick of the letter “" was far from the original letter. These kinds of orthographic inventions usually occurred in composition. I would suggest that because students in composition were busy constructing a text and making meaning, they did not stop at every letter to write it conventionally.

Grades were the criterion students reported they use to evaluate their own spelling ability. Teachers’ evaluation and marking of dictation and composition notebooks may influence and shape a student’s future spelling and writing if the teacher does not explain her criteria clearly. Even though 90% of the interviewees were satisfied with the teacher’s evaluation, by analyzing the samples, I found that spelling inventions were underlined only and there were no notes, suggestions, or comments on papers. As an outsider and a researcher, it was easy for me to figure out how dictation pieces were evaluated since all
the invented words were underlined. However, it was puzzling why some students had different grades when their composition papers had similar spelling inventions.

When students were asked about the best techniques to evaluate their papers if they were teachers, 25% thought that comparing the dictated pieces to the original text was the way; 15% thought that the teacher could provide more explanations regarding spelling inventions; and 10% thought papers should be corrected in a way that was more explicit. Analyzing what the students reported in the interviews, it was clear that students required more clarification and explanation of their spelling inventions and the evaluation technique the teacher was using.

Additional Findings

When analyzing sixth grade students’ dictation and composition, I recategorized spelling inventions into three language categories. However, I came across some findings and issues in students’ compositions that were not easily categorized. These findings might be interesting to consider for future research.

Writing Styles:

As explained previously composition can be an outlet for students’ ideas, but it can also revealed students’ writing style as well. For instance, redundancy occurred in some samples as in “because we are in the month of Ramadan, I congratulate teachers, professors, educators, people, children, friends, colleagues, trees, and stones.” In addition, writing as if a speech was given was also found in more than one sample. For example, “Oh, believers, let’s pray and fast,” “Hey brothers and sisters, Ramadan is the
best month to wash your sins,” “Friends, try to be better,” “Muslims, worship God better in Ramadan,” etc.

Using Verses of Koran to Support Students’ Ideas:

Compositions revealed students’ knowledge of poems, verses of the Koran, and the Hadith. Students were able to support their ideas with evidence from a range of sources. Doing such, reflected students own reading and knowledge. Such writing was not reflected in dictation. On the other hand, not all that the students wrote as supporting information was correct. For example, one participant wanted to add a verse of the Koran to support her idea about how Ramadan teaches Muslims patience. She added the word “صبرنا” to the end of this verse that is not in the Koran “إن الله مع الصابرين.” Another participant added the word “أمنوا” in the verse “يا أيها الذين آمنوا كتب عليكم الصيام كما كتب على “الذين آمنوا من قبلكم.”

Even though students studied the holy Koran and read it with competence, there was no proof that students carried the spelling differences that were found in the Koran to their writing. Studying the entire 160 samples of dictation and composition, only one participant had inventions that reflected the spelling variations of the Koran; she wrote “Koran” as “قرآن” which is an orthographic feature found in the Koran only.

Word Choice:

Word choice was another invention found in the compositions. The students were able to denote meaning by the choice of non-conventional vocabulary that did not represent any dialect or standard Arabic. For example, one of the participants wrote, “The bomb explodes to tell Muslims it’s time to end fasting:” where
she meant to write, “The cannon fired to tell Muslims it’s time to end fasting: انطلق المدفع: ليعلن انتهاء الصوم”.

Merging two words as if they were one word was another spelling invention as in إن شاء الله: if God wills” and was merged as “إنيشأ الله”. Another example found in the following sentence: أطيع والديك ولا تقلما أف: obey your parents and never complain (nevercomplain)”. The conventional spelling of the word “تقلما” in standard Arabic is divided into two words “تقل لهما”.

Writing Numbers in Arabic Grammar:

The representation of numbers was another grammar invention. When some students represented numbers in words instead numerals, some inventions occurred. Some numbers were represented numerically where they should have been represented alphabetically. For example, أغسل أسنانني 2 مرة في اليوم: I wash my teeth 2 times” where she meant “مرتين: twice, or two times”.

In the last chapter, I reflect on the analysis of my data and suggest implications of this study in writing in Arabic and English.
CHAPTER 6

CONCLUSION

Andrew Jackson wrote, “It’s a damn poor mind that can only think of one way to spell a word” (Cramer, 1998, p. 81). It is critical for children to have a literacy-rich, risk-free environment that includes time to invent, to play, and to experiment with written language for meaningful purposes. As Piaget (1973) stated, "Each time one prematurely teaches a child something he could have discovered for himself, that child is kept from inventing it and consequently from understanding it completely" (p. 715). When children invent, the kidwatcher teacher can sense the kinds of information the child transfers into writing.

Applying the information and knowledge about invented spelling in English and other languages, to Arabic spelling and to the Arabic nation is not sufficient. Arabic language, like the others, has its own special linguistic features and organization. Arabic language has its own system that merges more than one system. Even though Sapir (1925) noted that some languages may functions like the others, the Arabic language is unique with its system. In addition, invented spelling research in other languages is based on data, but until now there is no research or data collected about invented spelling in Arabic. This study serves the purpose of providing knowledge, implications and applications about spelling in Arabic.
Research Implication in Teachers and Teachers’ Education

Invented spelling in Arabic does not mean disregarding the holiness of the language and accepting illegible papers that are full with “misspellings”. Invented spelling in Arabic helps educators understand that it is important for children to have sufficient time to write and express themselves and their ideas spontaneously without being overly concerned to get every letter spelled conventionally at the expense of meaning. Children should learn to write by writing and not spend the majority of their instruction time talking about rules of writing and spelling. Children should practice what they know about spelling in authentic writing where they can use language naturally and have the chance to live and build on the language experience where they try writing in several ways and use different vocabularies.

Having an encouraging environment where children can write and invent does not mean that teachers have a “hands off” policy to teaching spelling. The teacher’s role in invented spelling is to help students write the best they can, and to rethink their spelling strategies and the logic behind their inventions. As shown in this research, students expect the teacher to let them work independently on their spelling and to try various strategies to overcome spelling difficulties.

Even though invented spelling should be encouraged, children should be held accountable for what they write (Routman, 1993). Children should be responsible for handwriting, rereading, checking for meaning, spelling, and punctuations. If children hand in their work edited and reread with spelling inventions, it means that children
thought hard about their spelling and thought it was conventional or close to conventional based on a certain logic they have.

I hope this research encourages Arabic language teachers in the UAE, and in the Arabic world, to rethink spelling and writing instruction. This research raises important issues about spelling, such as the value and logic of spelling inventions, the influence of oral language on spelling, and the message of writing.

This research also questions some methods in teaching spelling, such as evaluating students’ pieces. From my perspective, no one can prevent spelling inventions not even teachers. When any writer is faced with an unfamiliar word, he/she uses information they have about language and how it works.

In composition, Arabic language teachers consider two issues when evaluating students’ papers. First, how close students are in reflecting and writing about the topic, and whether they apply Arabic language writing system rules throughout the text. On the other hand, in dictation, Arabic language teachers focus on accurate spelling since the entire text is provided.

Students’ unfamiliarity with the composition topic, short test time, variety of topics, and having to write a certain number of words are other determinations of composition which invites different kinds of spelling inventions as a result. Teachers should be aware of these determinations before administering any composition test.

Gentry (1987) claims that purposeful writing allows children to grow cognitively. Teachers can encourage purposeful writing, such as the writing of messages, lists, plans, signs, letters, stories, songs, and poems. Compositions, therefore, should be conducted
and evaluated properly so students have their ideas and knowledge about language and life respected and appreciated.

Dictation may work for some children in learning spelling rules as Gentry claims “Without direct instruction, kids won't learn word-specific knowledge to communicate precisely and effectively” (Gentry, 1999, p. 1), but certainly it is not an ideal outlet for writing about their ideas and feelings. Invented spelling, as shown in students’ compositions provides opportunities for them to elaborate as they write and to appear as real persons with unique knowledge and ideas. As shown in my research, many students think that sounding out and asking for teacher’s help with spelling is the way to overcome spelling difficulties. Having dependent students is not an appropriate outcome of teaching spelling; in that allowing students to experience language and do the best they can makes the writers value writing and its’ message.

As shown in research, invented spelling, in compositions, allowed children to write creatively, to show their knowledge, to build their own texts with their own vocabularies and syntax, and to appear as real voices and identities and not just data. As explained in chapter 2, students in the United Arab Emirates learn writing through dictation and composition. As shown in this research, dictation tests students’ mastery of specific spelling rules and not what they know about language. In that, compositions are the only medium of writing where students can invent and experience written language.

This research pointed to the influence of oral language on print. Data proved the dialect had a great influence on spelling. In that, teachers should pronounce all the sounds in standard Arabic when dictating students to avoid mishearing and miswriting the words.
Importance of This Study for Students

My research has shown that learning to spell does not depend on memorization, it is a conceptual process. Students should be encouraged to use purposeful writing (Barchers, 1994). Invented spelling, as I discussed in chapter 2, is important for children’s development in that it promotes reading, allows children to invent and write safely and more expressively, encourages children to write longer and more qualitative pieces, and assures that the aim of spelling is not writing accurately, even if vital, but to denote meaning and express one’s self. I have shown the same is true for writing in Arabic. Without examining these inventions, teachers and educators will not be able to know what students’ know or have mastered about the Arabic language. As explained previously, Arabic written language is complex and not easy to acquire. Spelling is like handwriting both of them are not the anticipated outcome. Children know the power of language as a mean of communication. Thus, they invent their own way to write as they discover language. Children know that their written pieces should denote meaning. Consequently, teaching children to spell should not be a purpose in itself but part of a bigger meaningful writing process (Martenes, 1999).

As shown in research, students invented the spellings of rules they have been taught as well as rules that had not yet been introduced. Henderson (1990) urges that no rules at all should be taught. Henderson (cited in Routman, 2000) noted: “it is not rules that children need but experiences. Their capacity as human learners will bring them to a feel for, or tacit knowledge of, words long before they will be able to understand rules, literate adults do not use rules; they simply know”. Data show that in composition,
students have an outlet for their feelings and ideas, create additional spelling inventions, and produce more authentic and longer pieces than they do in dictation. According to Clarke (1988) students who invent spelling write more words, with low percentage of accuracy, than students in traditional spelling programs.

This study is important for students because they have the right to have their work valued by focusing on their language strengths rather than their misspellings. Students deserve a time for discussion about writing, spelling inventions, and how language works. By establishing a database of invented spelling in Arabic, researchers, teachers, and educators have baseline data to bridge the gap and explore developmental aspects of learning to spell in Arabic. Spelling inventions in Arabic are often studied based on students’ dictation and not compared or related to their compositions to investigate common features that may occur in different genres of writing.

Goodman (1973) viewed the importance of reading miscues as a “window” on reading (Goodman, & Owocki, 2002). In this research, spelling inventions are also a window on children’s decisions, substitutions, development, strategies and what they know. As a researcher, I found that students express their ideas better when they talk about other people’s ideas than their own. From their answers, the researcher can predict their problems, wishes, and their points of view. The instrument adopted to conduct the interview with the students was of great support to the research. Moreover, it provided an explanation for the different strategies students used to overcome some spelling problems, how they defined “good spellers”, and how they would act if they were teachers regarding spelling teaching and evaluation.
The interview reveals different answers to the questions presented. Some of these answers were frequent and agreed on by most of the interviewed students. Other findings were reported with no agreement from others. None of these answers were neglected because they explain new ideas that may be of great importance to the decision makers. Percentages were used to express the agreement level on each alternative item on every question.

Studying students’ samples also revealed students’ dialect used in their lives. Over all, spelling inventions found in the compositions revealed that the entire 80 sixth grade students knew that the aim of spelling was not writing every word accurately and conventionally as much as representing meaning and expressing one’s idea and self. Actually, by studying the entire samples, I found that every invented spelling had a logic behind it that could be explained by the linguistic features of Arabic.

However, although invented spelling is good and healthy, students need to move toward convention. Students become better spellers with more reading and writing and not spelling lessons or tests (Hughes & Searle 1997). Sandra Wilde (1997) noted that the teacher should focus on having more competent readers and writers and not simply be concerned with competent spellers. Once a child is a reader, he or she has information to carry to spelling.

Research Overview

Field Overview:

The three schools were helpful and cooperative. All three principals supported my data collection in their schools and made my work easier. They arranged a meeting with
the language teacher, gave me a special room to work in, and allowed me to use of the copy machine as needed.

Generally, the sixth grade students were cooperative and willing to help. I was pleased with their interviews and answers when they talked to me openly about what they believed about spelling and their areas of weaknesses. Surprisingly, one of the participants who was thought to be learning disabled was a very fluent talker. She was the first interviewee to relate spelling improvement to reading, and she was the first to say bravely that she rarely understands the teacher’s marks and correction on her spelling sheet when it is returned to her.

Further Research:

In this research, I looked at students’ dictation and composition samples and marked the spelling invention once it occurred. I did not explore if these inventions were consistent, repeated, or avoided in the same text due to the nature of the dictation text I used in this study. From my point of view, it is important to study each sample thoroughly to track the writer’s performance throughout the text. For future research, I suggest choosing dictation or composition samples that allows the researcher to have a deeper view and interpretation by looking at the consistency of spelling inventions in every sample.

For future research, in terms of invented spelling in Arabic, more research needs to be conducted with preschool and early elementary school children to track their spelling development. Also children’s writing before school should be studied. It would be important to see whether the developmental stage or levels documented by researchers
in English, Spanish, and other languages occur in Arabic. I discovered that it is very interesting and important to listen to students talk retrospectively about their spelling inventions.

In term of teacher education, thorough studies about the validity and choice of dictation pieces, criteria to evaluate composition and dictations, and designing individualized spelling instructions and minilessons around students’ spelling inventions are also issues to be considered.

To conduct research to study invented spelling through dictations and compositions like this research, I would suggest having a longer dictation piece where the language features can be studied throughout the text and where a spelling rule appears more than once.

Invented Spelling in the UAE Elementary Schools

Teaching children to spell in Arabic went beyond spelling accuracy. The nature of the Arabic language played a major role in students’ invented spelling. When the teacher dictated, her dialect played a role in students’ spelling. Writing in Arabic is connected to religion and identity.

Regarding the research title, “What do Sixth Grade Students in the United Arab Emirates (U.A.E) Know about Arabic Spelling”, I found that writers’ inventions revealed a great deal about what Arabic students’ knew about both written and oral Arabic language. For instance, their inventions showed that students by sixth grade have enough control over the Arabic written language that their conventions exceed their spelling inventions. Data revealed that sixth grade students knew the directionality of Arabic
language, that Arabic writing is cursive, and it represents the sounds of the Arabic language. The sixth graders showed that they know how grammar works, use of gender and their wordings in Arabic language, knowledge of standard vocabulary, and organization of the sentence. When children invented spelling in Arabic, they taught themselves about phonics as Wilde (1997) says they do in English.

Even though Wilde (1992) noted many synonyms for invented spelling such as phonic and sound spelling, this research shows that spelling inventions in Arabic reflects more than the phonological aspect of the language.

Explaining Invented Spelling to the UAE Arabic Language Teachers

Studying literature, data, and findings of this research, can provide UAE Arabic language teachers with a rich background of invented spelling and its importance in fostering spelling development. Even though, many teachers may not be comfortable having their students invent all the time, invented spellings are not supposed to be permanent. Bearing that in mind does not mean disallowing or preventing invented spelling. On the contrary, it means allowing and offering more teaching and activities of standard spelling. Both invented and standard spelling should be encouraged in the classroom because “we want children to spell correctly the words they know, and we want them to invent spellings for the words they do not know how to spell” (Cramer, 1998, p. 105).

Invented spelling can be explained to the UAE Arabic language teachers and parents as well by demonstrating the following:
1. **Invented spelling is not permanent and does not substitute for standard spelling:**

   In other words, believing in the importance of invented spelling is not meant to stop teaching standard spelling. Invented spelling is allowed for the words that children are not sure how to spell and will diminish in time as students mature and are exposed to standard spelling. As shown in this research, when students write expressively to construct their own texts, such writing is supported and encouraged. They employ their knowledge of poems, Koran and Hadith, grammatical rules, syntactic rules, etc which allows students to practice and use their knowledge. Evaluating and giving grades to everything students write, may diminish students’ writing creativity and push them to seek writing accuracy only as in dictation. Teachers are not to encourage students to write in any spelling they would like. Rather, teachers should encourage students to use their knowledge of the alphabet, sound to letter correspondences, patterns and meaning to invent. Teachers do this by providing activities that stimulate children to produce invented spelling as they think about their written output (Ferreiro & Vernon, 1999). Teachers should design individualized instructions that are developmentally appropriate for students (Gentry, 1999).

2. **Invented spelling promotes reading, writing, and spelling skills:** Almost all teachers and parents want their children to be able to write and read at an early age. With a huge oral vocabulary and limited spelling experience, children are expected to invent spellings based on their perception of the language and the world around them. Invented spelling allows children to write and to express their
ideas and stories. As shown and proven in this research, when students were given the chance to write freely and construct their own texts, they produced meaningful pieces that were rich with knowledge not only about spelling rules but about language and life. Examples of students’ writing using invented spelling were indications that children understand and enjoy the purpose of writing. The more children write, the more they read to edit. Reading also provides information about the sounds of the words, the organization of sentences and the meanings of written texts.

3. **Data:** Even though data about invented spelling in Arabic is not sufficient, this research is living proof that children’s inventions are not signs of an impediment. Students’ written stories using invented spelling compared to those where students stick to standard spelling provides equivalent evidence. From my point of view, it is convincing to show parents their child’s progress over time in writing using invented spelling and her/his shift toward standard spelling.

The best words to conclude this research are “Let us say "good-bye" to that which prevents children from being authentic "meaning makers." As Freire (1970) stated, “the teacher is no longer merely one who teaches, but one who is herself taught in dialogue with the children” as she in turn learns from them. p.53.
APPENDIX A

Subject Informed Consent Form/ Parental Informed Consent Form

PROJECT TITLE:

INVENTED SPELLING IN ARABIC: WHAT DO United Arab Emirates (UAE) SIXTH GRADE STUDENTS KNOW ABOUT ARABIC SPELLING.

PURPOSE

You are being invited to participate voluntarily in the above-titled research project. The purpose of this project is intended to investigate what Arabic children of the United Arab Emirates (UAE) know about the written system of the Arabic language when they invent as they write.

SELECTION CRITERIA

I selected the population of sixth grade students’ who reside in Dubai City, United Arab Emirates. I selected sixth grade purposefully because it is the last grade in the elementary cycle where students are supposed to acquire the basic spelling rules any Arabic writer should have. Assuming that there are 25 students in each classroom, 75 students will participate in the present study.

PROCEDURE(S)

I will ask three Arabic language teachers from the three schools I will visit to collect samples of sixth graders’ compositions and dictation pieces without copying the cover page that has students’ names on them. Since the dictation and composition topics are the same for all public schools, I will ask the teachers to have the first dictation and composition writing samples. I will analyze these samples to find out common students’ spelling inventions found in different contexts (dictation and compositions).

For interview purposes, I will ask the three teachers to choose six to eight students for the interview (2 above average, 2-4 average, and 2 below average) as per the grade book. The interview with each student will take place one at a time in the social worker’s office. Each interview will take approximately 10-12 minutes and will refer students’ general thoughts about spelling and spelling inventions in general. Teachers will not be allowed in the room during students’ interview. Data will be generalized so every student is anonymous. No names will be obtained during the interview as well. Students will remain anonymous to the researcher throughout the study.
RISKS
Students might be not comfortable knowing that their writing is reviewed by an outsider, and they might be uncomfortable talking to an outsider about their thoughts regarding spelling in general. Students might get bored during the interview as well.

BENEFITS
For teachers, students' invented spellings must be seen as opportunities for them to contribute actively to their own learning. By combining an understanding of invented spelling with formal spelling instruction, teachers may be able to develop effective spelling instructions. Furthermore, this study is important for students too. Students have the right to have their work valued by focusing on their language strengths rather than viewing their misspellings as deficits. Students deserve a time within the curriculum for discussion about writing, spelling inventions, and how language works.

Since this study focuses on a new issue of Arabic education, researchers, educators, and teachers will be introduced to the concept of invented spelling, and its application to education will reveal other aspects of evaluation and the perception of miscues or spelling inventions. By establishing a database of invented spelling in Arabic, researchers, teachers, and educators will have a baseline data to bridge the gap and explore developmental aspects of learning to spell in Arabic, particularly how invented spelling of young Arabic writers relates to early reading and to essential literacy elements such as phonemic awareness and phonics.

CONFIDENTIALITY
There is no linkage for the researcher between the data and the participants since the researcher is an outsider and does not know the students who participated in the study with their written samples or in the interview. All the copies of students’ written samples and the interviews have no names on them and it is impossible for me as a researcher to identify the writer. For maximum assurance, the data will be shredded after writing the research finding.

PARTICIPATION COSTS AND SUBJECT COMPENSATION
There is no cost to you for participating except your time.

CONTACTS
You can obtain further information from the principal investigator Karima M. Aljelajel, Ph.D. Candidate, University of Arizona  at (    )in Tucson, U.S.A, and +97150-(    ) United Arab Emirates. If you have questions concerning your rights as a research subject, you may call the University of Arizona Human Subjects Protection Program office at (520) 626-6721. (If out of state use the toll-free number 1-866-278-1455.)

LIABILITY
Side effects or harm are possible in any research program despite the use of high standards of care and could occur through no fault of yours or the investigator involved. Known side effects have been described in this consent form. However, unforeseeable harm also may occur and require care. You do not give up any of your legal rights by signing this form. In the event that you require or are billed for medical care that you feel has been caused by the research, you should contact the principal Karima M. Aljelajel, Ph.D. Candidate, University of Arizona at ( ) in Tucson, U.S.A, and +97150-United Arab Emirates.

AUTHORIZATION
Before giving my consent by signing this form, the methods, inconveniences, risks, and benefits have been explained to me and my questions have been answered. I may ask questions at any time and I am free to withdraw from the project at any time without causing bad feelings or affecting my medical care. My participation in this project may be ended by the investigator or by the sponsor for reasons that would be explained. New information developed during the course of this study which may affect my willingness to continue in this research project will be given to me as it becomes available. This consent form will be filed in an area designated by the Human Subjects Committee with access restricted by the principal investigator Karima M. Aljelajel, Ph.D. Candidate, University of Arizona . I do not give up any of my legal rights by signing this form. A copy of this signed consent form will be given to me.

___________________________________  _____________
Subject's Signature     Date

___________________________________  _____________
Parent/Legal Guardian (if necessary)     Date

___________________________________  _____________
Witness (if necessary)     Date

INVESTIGATOR'S AFFIDAVIT:
Either I have or my agent has carefully explained to the subject the nature of the above project. I hereby certify that to the best of my knowledge the person who signed this consent form was informed of the nature, demands, benefits, and risks involved in his/her participation.

___________________________________  _____________
Signature of Presenter     Date

___________________________________  _____________
_ Karima M. Aljelajel _     Date
Signature of Investigator
APPENDIX A

Arabic Translation

اتفاقية مع الأسرة أو المسؤول القانوني عن القاصر

عنوان البحث:

الإدعاء الإسلامي: ما الذي يعرفه طالب السادس الابتدائي عن اللغة العربية المكتوبة

في هذه الاتفاقية، أنت مطالب بقراءة الاتفاقية كاملة وعليك أن تفهم تفصيلياً عن البحث. هناك العديد من المناقشات والمشاركون الذين توفيروا لنا بعض المعلومات حول الموضوع.

بالنسبة للطالب، الحدث من جراء اجراء هذا البحث من خلال التفاعل مع المشاركين في البحث. التفاعلات الفردية تساهم فيijing الموضوع والمنافع التي قد تحق بطالب هذه الحالة.

الغرض:

سيكون ابنك/ابنتك مدعوا للانضمام الاختياري في البحث المعنون أعلاه. والهدف من هذا البحث هو دراسة الأخطاء الإسلامية الشائعة في اللغة العربيتاء في الإعلام والتعبير الإànhائي والتعبير عن الاستراتيجيات الإسلامية التي تستخدمها الطلاب عند مواجهة كلمات صعبة أو جديدة.

طريقة اختيار العينة:

تمت، تفتيش جامعة الإمارات العربية المتحدة ووزارة التربية والتعليم في مدينة دبي على إجراء البحث. وذلك ناظر للمدرسة والذي سيشرح لك بالتفصيل عن ماهية البحث. حتى يكون ابنك مفتوحاً للاشتراك في البحث من ثم أن يكون بين عمر 9 و12 سنة. العدد الكامل للطلاب المشاركون هو 80 من مدينة دبي من 3 مدارس حكومية مختلفة في الدولة.

طريقة البحث:

فيما يلي سأوضح بالتفصيل عملية البحث والتي ستستمر خلال الفصل الدراسي الأول من عام 2005 ولدتها 4 أشهر تقريباً.

المخاطر:

بالكامل، لا توجد أية مخاطر أو أضرار قد تحق بالطالب خصوصاً أو نسبياً. أكثر الخصائص هو انسجام الطالب

بالإجراة من عدم الرغبة في المشاركة في البحث أو الإجراة لعدم تمكنه من الإجاية على أسلة المقابلة.

السرية:

لن يتم ذكر اسم ابنك/ابنتك طوال البحث وسأتزم كباحث بسرية المعلومات من عينات تعبير وإنشاء أو مقابلة.

وجد. لن يطلب من الطالب طوال البحث ذكر اسمه أو شهادة الملتحق بها.

مصاريف ومَعوضات الاشتراك:

لا توجد أية مصاريف أو تعويضات مالية لتعطى للطالب مقابل العينات، والشيء الوحيد الذي سيشاركنا فيه ابنك/ابنتك هو الوقت. ولن تستلم المدرسة ولا الأهل ولا الطالب أي تعويضات مالية عن العينات أو الوقت المستخدم في البحث.
المؤلف:

تستضيف معرفة الكثير عن تفاصيل البحث عن طريق الاتصال بالمدرسة أو مدرسة اللغة العربية أو الباحث نفسه:
كريمة مطر المزروعي (مرشحة لنيل درجة الدكتوراه من جامعة أريزونا- الولايات المتحدة الأمريكية) على الرقم
الأولي: +.

المسؤولية:

الأخطار الجانبية محتمل وقوعها في أي بحث ميداني، لا توجد أخطار أو مضار عالية الخطورة من الاتصال في
البحث. و من ثم فإن الباحث والطالب غير مسؤولين عن الأضرار. لقد تم شرح الأخطار الجانبية التي قد تلحق
المشارك في البحث فيما سبق. عند وجود أي استفسار يرجى الاتصال بالمدرسة أو معلمة اللغة العربية أو الباحثة:
كريمة مطر المزروعي (مرشحة لنيل درجة الدكتوراه من جامعة أريزونا- الولايات المتحدة الأمريكية) على الرقم
الأولي: ( )

التنويه:

قبل أن توقع على موافقتك لاشتراك ابنك/ ابنتك في البحث يجب عليه قراءة بنود الاتفاقية جيدا لمعرفة الأضرار
والتعويضات وفائد البحث. أرجح بأسنتلك في أي وقت و وافق على منح ابنك/ ابنتك في أي وقت من أوقات
البحث. لو حدث في البحث الذي قد يترأ على الأبناء المشاركون فإنه سيتم إعلامك فورا. هذه الاتفاقية سيتم إرسالها إلى
منظمة حقوق العينة المشاركة في البحث.
كريمة مطر المزروعي (مرشحة لنيل درجة الدكتوراه من جامعة أريزونا- الولايات المتحدة الأمريكية) قسم دراسات
تعليم القراءة في كلية التربية – جامعة أريزونا.

اسم الطالب المشارك:

التاريخ

الأسرة أو المسؤول القانوني عن الطالب:

التاريخ

الشاهد

دور البحث:

لقد تمت (أو أخذ بالناية عن) بشرح تفصيلي عن بنود الاتفاقية للأسرة أو المسؤول القانوني عن الحدث و من ثم فإن
توقيع الشخص أعلاه يؤكد ما تم شرحه من طبيعة البحث والتعويضات والأخطار التي قد تلحق بالحدث من جراء هذا
البحث.

توقيع شارح العقد: كريمة مطر راشد

التاريخ

توقيع الباحث: 

التاريخ
Minor’s Assent Form

Title of Project: INVENTED SPELLING IN ARABIC: WHAT DO UNITED ARAB EMIRATES (UAE) SIXTH GRADE STUDENTS KNOW ABOUT ARABIC SPELLING

Your mother/father has told me it was okay for you to participate in this study. I will ask your Arabic language teacher to copy a sample of your dictation and composition writing without copying the cover page that has your name. In addition, I may interview you to talk about your general thoughts about spelling and spelling inventions, I will not need to know your name throughout the study. You do not have to be in this research study and you can stop at any time.

Do you have any questions? Is it OK?

Child's Name

Child’s Signature   Date

Presenter’s Signature   Date

Investigator's Signature   Date
اتفاقية مع الطالب على الاشتراع في البحث

لقد وافقت أمريكية أن تشترك معي في هذا البحث. سوف أطلب من مدرسة اللغة العربية أن تزودني بعينة من التعبير وأخرى من الإملاء وقد أطلب مقابلة معك حول الأخطاء الإملائية الشائعة بين طلاب الصف السادس الابتدائي. لن أحتاج طوال فترة البحث أن أعرف اسمك أو أي معلومات شخصية عنك.

لك مطلق الحرية في الاشتراع أو الانسحاب من البحث قبل البدء في البحث أو أثناءه أو أي وقت آخر.

ولدي كامل الاستعداد للإجابة على استفساراتك. فهل توافق على الاشتراع؟

اسم الطالب:

توقيع الطالب:

التاريخ:

اسم الباحث:

توقيع الباحث:

التاريخ:
APPENDIX B

Spelling Interview

1. When you are dictated and come to a word you do not know, what do you do?

What else could you do?

2. When you are writing a composition and come to a word you do not know, what do you do?

What else could you do?

3. Who is a good speller you know?

4. What makes ________ good speller?

5. Do you think ________ ever comes to a word he/she does not know when writing?

6. (Yes) When________ does come to something she/he does not know, what do you think he/she does?

   (No) Suppose ________ comes to something she/he does not know, what do think he/she does?
7. If you knew someone was having trouble in spelling, how would you help that person?

8. What would your teacher do to help that person?

9. How did you learn to spell?

10. Do you think that you are a good speller? Why

11. Do you think that you are a better speller in dictation or composition writing? Why?

12. Do you think that correct spelling is important in composition writing? Why? Or why not?

13. How do you know when you spell something right?

14. How do you know when you spell something wrong?

15. What do you do when you spell something wrong?
16. What are the difficult spelling rules you face when it comes to dictation or composition writing?

17. If you were a language teacher, how would you teach that rule?

18. If you were a language teacher, how would you teach spelling?

19. In your opinion, how can a student improve his/her spelling?

20. Is it easy for you to understand how your spelling is evaluated?

21. If you were a language teacher, how will you evaluate students’ spelling?
مقابلة مع الطالب حول الإملاء

1. عندما تجد أثناء الإملاء كلمات صعبة لا تعرف كيف تكتبها، كيف تتصرف؟
   هل تفعل شيئا أخرًا؟

2. عندما تمر عليك في كتابة التعبير كلمات صعبة لا تعرف كيف تكتبها، كيف تتصرف؟
   هل تفعل شيئا أخرًا؟

3. هل تعرف أي شخص يتقن الإملاء؟

4. من الذي يجعل هذا الشخص كاتبًا جيدًا؟

5. هل تعتقد أن هذا الشخص قد تمر عليه كلمات صعبة لا يعرف كتابتها؟ نعم لا

6. إذا كانت الإجابة بنعم، ماذا تعتقد أن هذا الشخص يفعل عندما تمر عليه كلمات صعبة؟
   إذا كانت الإجابة بلا، تخيل أن هذا الشخص قد تمر عليه كلمات صعبة، كيف تعتقد أنه سيتصرف عندما تمر عليه كلمات صعبة؟
7. إذا كنت تعرف أن شخصًا تعرفه يعاني بعض الصعوبات في الإملاء، كيف ستساعد؟ وماهي النصائح التي ستردده بها؟

8. من الذي تتوقع أن تقوم به المدرسة لمساعدة ذلك الطالب؟

9. كيف تعلمت أن تكتب؟

10. هل تعتقد أن إملاءك جيد؟ لماذا؟

11. هل تجد أن إملاءك أفضل في موضوعات الإملاء أم التعبير الحر؟ لماذا؟

12. هل ترى أن الإملاء السليم ضروري في التعبير؟ لماذا؟

13. كيف تعرف أن ماكتبه سليم إملانيا؟

14. كيف تعرف أنك أخطأت في الإملاء؟

15. لماذا تفعل عندما تكتب الكلمة بشكل خاطئ؟

16. هل هناك قاعدة إملانية معينة تعصب عليك؟

17. لو كنت مدرسا للغة العربية كيف ستدرس الطلاب هذه القاعدة الإملانية؟

18. لو كنت مدرسا للغة العربية كيف ستدرس الطلاب الإملاء؟

19. كيف يستطيع الطلاب تحسين مستواهم في الإملاء من وجهة نظرك؟
20. هل تفهم طريقة تصحح المدرس لكراسات الإملاء؟

21. لو كنت مدرساً للغة العربية كيف ستصبح كراسات الإملاء؟
REFERENCES


