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**The Impact of Poor Handwriting on the Readability of
Pupils' Written Productions**

**The Case of Fourth Year Pupils at Hamlaoui Mohamed Middle School
In Doucen**

**A Dissertation Submitted to the Department of Foreign Languages in Partial
Fulfilment of the Requirements for the Master's Degree in Sciences of the Language**

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Dedications

To Brahim Douida

To the soul of my father, may he rest in peace

To my beautiful mother

To the one who I truly love

To my brothers Ibrahim Elkhalile, Sifeddine, Mohammed, Hichem, Bilal, and Souhile

To my sisters Widad, Sana, Zahra, Afafe, and Wafa

To my sisters in Law Meriem and Hanine

To my nephews Fadi, Ramzi, Raif, Faiz, Selama, Islam, Rayane, Monsif, and Houssein

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Abstract

The majority of the Algerian pupils are suffering from their poor handwriting and they are struggling to overcome this issue which is extremely influential especially in their educational career. Hence, the purpose of the present study is to investigate the impact of poor handwriting on the readability of pupils' written productions. Thus, we hypothesized that if pupils have poor handwriting, teachers' reading comprehension will be negatively influenced. To prove this hypothesis, a descriptive study is conducted besides to a qualitative method to gather and analyze data. Furthermore, to test our hypothesis, two data collection tools were selected. A questionnaire was designed and administered to eleven middle school teachers of English language, who were chosen randomly from different middle schools, to gain their attitudes toward their pupils' handwriting and to seek answers for the research questions. Additionally, a classroom observation was conducted on pupils of fourth year classes in Hamlaoui Mohamed middle school –Doucen in order to check the various factors that affect pupils' handwriting during examination. From the findings obtained out of the two data gathering tools, it can be concluded that the lack of teachers' reading comprehension is indeed the result of the pupils' poor handwriting. Thus, those findings confirmed the validity of the aforementioned hypothesis. Therefore, pupils' poor handwriting affects negatively teachers' reading comprehension. Eventually, some recommendations were proposed based on the research findings, at the end of this study.

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List of Abbreviations and Acronyms

EFL: English as a Foreign Language.

e.g.: *exempli gratia* (for example).

Et al.: *et alia* (and others).

Etc: *et cetera* (and so on, and so forth).

i.e: *id est* (in other words).

L2: second language.

Q: question.

p: page.

&: and.

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General Introduction

Writing receives an extremely crucial importance among the four skills of language and it is basic for both the teaching and the learning processes. This skill is used as an effective way to communicate knowledge because it is considered as the representation of our oral discourse. Thus, it can be said that writing stands as a means of communication among teachers and their pupils; in the sense that pupils decode their knowledge through the use of the writing system so that it is presented in a visible way for teachers to read and assess; This what emphasizes the critical role of writing in the educational context.

Despite the enormous advancement in word processing which facilitates to a great extent the writing task, still in the Algerian academic system and several educational systems of other nations, pupils are examined based on what they handwrite and this determines whether they are accepted or rejected to upper classes; this stresses the vital role handwriting plays in educational success. Hence, handwriting may stand as an obstacle for pupils because simply it hinders them from conveying their thoughts, ideas and knowledge as they intend to which eventually leads them to educational failure because knowledge was not communicated effectively.

1. Statement of the Problem

Many think that handwriting and reading comprehension are two separate skills; interestingly they are closely related especially in the educational context. To illustrate more, handwriting is used as a means through which pupils can communicate their knowledge to be assessed by their teachers; however, the transmission of knowledge may depend on the quality of pupils' handwriting in order for teachers to read it easily, and obtain what is meant to be conveyed.

In the Algerian context, handwriting is taught merely at the level of primary school; however, this seems to be insufficient because most Algerian middle school pupils face problems in their handwriting especially in English language. This may be a consequence of that middle school teachers of English start teaching the writing mechanisms such as spelling, grammar and punctuation with the assumption that their pupils were already taught how to handwrite letters in French because both languages have the same alphabet. Therefore, teaching handwriting is totally ignored in the Algerian middle school.

Generally, pupils are asked to write in order to be evaluated by their teachers whose evaluation is based on what they comprehend out of their readings of pupils' written productions. Moreover, teachers' reading comprehension may vary due to various reasons which may as well alter their evaluation of what they are reading. Thus, it can be stated that reading comprehension plays an important role in evaluating what pupils write.

Our interest in handwriting may seem strange; however, it stems from our own observation when correcting middle school pupils' of fourth year classes test papers of English language. During correction, the researcher was encountered with a considerable number of poor handwritten test papers which made the process of deciphering and comprehending a hard task for the researcher; especially in pupils' written productions because the researcher could not achieve the pupils' intended meaning ; samples of those written productions are presented in the appendix three p. 117.

The observation illustrated above made the researcher wonder about the factors that led pupils produce such poor handwriting; and whether poor handwriting has an effect only on the appearance of the pupils' answers or it goes beyond this affect the readability of their handwriting and to impact their teachers' reading comprehension. Therefore, the present study is devoted mainly to diagnose the impact that pupils' poor handwriting has on the reading comprehension of teachers.

2. Aims of the Study

Through this study we aimed to:

- Determine the different factors affecting pupils' handwriting during examination.
- Investigate the impact of poor handwriting on teacher's reading comprehension.
- Determine teachers' attitudes toward pupils' handwriting.

3. Research Questions

The present study is an attempt to answer the following questions :

- Does poor handwriting impact examiners' reading comprehension ?
- What are teachers attitudes toward pupils' poor handwriting ?
- What kind of feedback teachers give to their pupils' poor handwriting ?
- What are the factors that affect pupils' handwriting ?
- What are teachers attitudes toward readable handwriting ?

4. Research Hypothesis

Through this study, we attempt to verify one main hypothesis:

- We hypothesize that if pupils have poor handwriting, teachers' reading comprehension will be negatively influenced.

5. Significance of the study

The importance of this study resides in that it draws attention to an ignored but very crucial skill such as handwriting. Through this study, we attempted to prove that there is a strong relation between poor handwriting and teachers' reading comprehension. Additionally, we believe that this study is worthy doing because it attempts to offer teachers with insights about handwriting and it reveals the various factors affecting handwriting that lead pupils to produce poor handwriting which in turn hinders teachers' reading comprehension.

6. Research Methodology

Due to the nature of this research, a descriptive method is adopted in order to verify our research hypothesis and to seek connection between our two variables; the pupils' poor handwriting as an independent variable, and teachers' reading comprehension as a dependent variable. Moreover, the study is based on the qualitative method to obtain more reliable answers for this investigation.

6.1 Population

The case study of this research is pupils of fourth year classes in Hamlaoui Mohamed-Doucen middle school. Additionally, the study is about the impact of poor handwriting on middle school teachers' reading comprehension. Thus, the present study includes both middle school teachers from different middle schools ; in addition to pupils of fourth year classes in Hamlaoui Mohamed- Doucen middle school.

6.2 Sample

Since our study is concerned with the impact of pupils' poor handwriting on middle school teachers' reading comprehension, (11) eleven middle school teachers who teach English language were randomly selected from different middle schools, and they were given questionnaires in the purpose of gathering data about the topic under investigation. Furthermore, the present study deals with a sample of group that consists of (19) nineteen pupils who are randomly chosen from a population of (78) seventy-eight pupils of fourth year classes in Hamlaoui Mohamed-Doucen middle school. The reason behind choosing this sample is that they are going to take their brevet exam and that their exam papers are going to be corrected by teachers others than those who teach them; thus a readable handwriting is a must to convey the intended message.

6.3 Data gathering Tools

Two data gathering tools were used: a teacher's questionnaire and a classroom observation, in order to seek answers to our research questions and for the sake of testing the validity of our hypothesis.

6.3.1 Teachers' Questionnaire

A questionnaire was used as a means for data collection tool because it is an appropriate tool in the descriptive method. This questionnaire was administered to middle school teachers of English language to obtain their views and attitudes toward our topic which helped us to answer the addressed questions of this research and to check our hypothesis.

6.3.2 Classroom observation

A classroom observation was conducted on pupils of fourth year classes in Hamlaoui Mohamed middle school during examination, In an attempt to determine the various factors that affect pupils' handwriting during examination.

7. Structure of the Study

The present dissertation is divided into three main chapters; the first two chapters represent the theoretical background of this study, and the third chapter is devoted to the fieldwork. The initial part of the first chapter dealt with a general overview about the writing skill: its definitions, assessment, and aspects. The rest of the chapter shed light on some main aspects related to handwriting to name few: fine motor skills, handwriting styles, factors affecting handwriting and pencil grasps. The second chapter provided an overview of reading as a skill: its definitions, types, and models. Then it highlighted some aspects concerning reading comprehension. Eventually, the last chapter in this dissertation dealt with the analysis and interpretation of the results; in addition to the discussion of the

obtained findings through the two data collection tools which are the teachers' questionnaire and the classroom observation.

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Introduction

Writing is a way of communication that uses graphic symbols. It plays a crucial role in both the teaching and learning processes because it is considered as the representation of our oral discourse. Moreover, writing is the most needed skill in examining students because they are examined based on what they write. For this reason students need to enhance their handwriting because it represents their thoughts, ideas and knowledge. In this chapter, we will deal with a general overview of writing which includes important definitions of the writing skill, ways of assessing writing and the different writing aspects. Then, we will cast some light on handwriting and highlight vital elements concerning this skill such as its definitions, importance, factors that affect handwriting, and eventually teaching and assessing handwriting.

1.1 General Overview of Writing

Writing is one of the four language skills that is considered a difficult skill to be taught and mastered, as Harmer (2007) points out that "of all skills, writing is the one that teachers and learners seem most reluctant to focus on because it requires them to make special efforts" (p. 360). Moreover, the complexity and difficulty of writing lies in that writing is not merely the mastery of the mechanical skills but also it needs conscious and mental efforts. For this, Tribble (1996) states that "learning to write is not just a question of developing a set of mechanical 'orthographic' skills. It also involves learning a new set of cognitive and social relation" (p. 12). Additionally, Harris (1993) states that "writing is not an innate natural ability but is a cognitive ability" (p. 78).

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Additionally, Richard and Renandya (2002) point out that "there is no doubt that writing is the most difficult skill for L2 learners to master" (p. 303). In the same sense, Tribble (1996, p. 11) thinks that writing is not a skill that can be acquired by exposure. However, it needs some kind of instruction because it is not like the other language skills such as speaking. In the former, the writer is able to use only words to express ideas, feelings and thoughts. Therefore, different interpretations may take place from the part of the reader. However, in the latter, the speaker can use various ways of communication with which s/he can convey the intended message. In this respect Hedge (2005) points out:

A writer is unable to exploit all the devices available to a speaker such as gestures, body movement, facial expression, pitch and tone of voice, stress, and hesitation. A speaker can backtrack or clarify and revise ideas as listeners question or disagree (p. 7).

Despite the complexity of the writing skill, EFL learners and teachers are consciously aware of its importance in education and that it is a fundamental skill in academic success because language learners are examined based on what they write and this determines whether they are accepted or rejected to upper classes. As a result, most EFL learners strive to develop good writing skills for a better educational achievement.

1.2 Definitions of Writing

There is no agreement upon one single definition of writing. However, there are numerous definitions which differ in accordance with the context in which they are delivered and they are as many as the scholars who attempted to give a definition to this term.

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Generally speaking, writing means words in symbols written down as a means of communication (Encarta World English Dictionary, 1999). Moreover, according to Trrible (1996), "writing works as a type of discourse, a way of creating a meaningful interaction between the writer and a possible reader"(p. 10). Thus, writing is a tool for communication used to convey ideas, thoughts and feeling via language symbols.

Several definitions have been yielded by scholars to the term of writing, and each scholar provided a definition from his own angle of profession, As a result, writing seems to be attached to a number of other terms, so the definitions of writing differ in accordance with the term it is attached to.

1.2.1 Writing as a System

Writing as a system does not only imply encoding language using symbols, but also it involves the rules which govern those symbols so that they effectively represent language in a visible form. To put it differently, this means that there is a kind of convention that the written forms of languages are arranged in. According to Byrne (1979), "writing is clearly much than the production of graphic symbols just as speech is more than the production of sounds" (p. 01).

1.2.2 Writing as a Skill

Writing as a skill implies the ability to use language conventions in the act of writing "learning to write entails learning to differentiate and manipulate the elements of the written system" (Bader, 2007. p. 6). Accordingly, Harris (1993) considers writing as a complex activity. It is apparently a complex skill that involves complex procedures (cited in Saihi,2014, p. 13). Therefore, writers who have good writing skills and who are knowledgeable of the writing system are those who are most likely to be good writers.

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As mentioned earlier in this chapter, writing is not the acapacity that the individual is endowed with. Thus, it needs much more practice, time and efforts in order for the individual to write well.

1.2.3 Writing as a Process

Writing as a process emphasizes more on the set of ordered stages of writing rather than the final product. Zamel (1982) agrees with this and states that "writing is a process through which students can explore their thoughts" (p. 207). Furthermore, writing is an extremely complex activity in which writers have to integrate different writing skills into the various overlapping writing stages in order to end up having their final written product. According to Trrible (1996), "in reality the writing process is more complex than this, of course, and the various stages of drafting, reviewing, re-reading and writing, etc. are done in a recursive, way: we loop backwards and move forwards between these various stages" (as cited in Harmer, 2007, p. 326).

1.2.4 Writing as a Genre

Writing is regarded by many scholars as a genre , this implies that there are different forms of writing which are called 'genres' that each one of which has its own distinguishable and particular vocabulary, punctuation, and grammar constructions; as Harmer (2007) stated that:

Students who are writing within certain genre need to consider a number of different factors. They need to have knowledge of the topic, the conventions and style of the genre, and the context in which their writing will be read as well as by whom (p. 327).

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Hence, the context, style and the audience are crucial element to be taken in consideration in writing.

1.3 Assessing Writing

1.3.1 Definitions and Importance of Assessment

Nowadays, we live in a world that is connected with technology and we rely on the various ways that it has brought to us in order to make most of our communication. Thus, many of us think that it is the main reason behind the declining level of writing among pupils, as well as the reason behind their below grade level in writing, yet we overlook a vital aspect which is assessment in writing.

According to Saihi (2014, p. 37), "assessment is an overall process to give feedback and feed forward to refine the teaching and learning processes". Hence, assessment is a vital process in both the learning and the teaching processes. Therefore, assessment, in one hand, gives the opportunity for teachers to track the progress of their learners and give feedback and measurement for it, as well as to improve their instructional methods adopted in teaching writing.

In the other hand, it helps pupils to obtain a feedback or measurement depending on the type of assessment which help them ameliorate their proficiency level in writing. For this, Narayanan (2013) states that "assessment is the systematic collection, review and the use of information about educational programs undertaken for the purpose of improving student's learning and development".

1.3.2 Types of Assessment

Assessment is a continuous and an ongoing process which is integrated in teaching and learning. It has a variety of types depending on the purpose or function it is done for.

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Therefore, we can differentiate two different, overlapping and complementary types of assessment that can be used effectively in writing which are summative and formative assessment. According to Coffin, et al. (2003), summative assessment is designed formally to evaluate a student's performance while formative assessment is designed to support a student's learning (p. 104).

1.3.2.1 Summative Assessment of Writing

Orlich, Harder, Callahan, Trevisan and Brown (2010, p. 331) defined summative assessment as "a process of 'summing up' achievement in some way or conducting a status check on accomplishment at a given point of time". To illustrate more, Summative assessment takes place at the end of an instructional unit or a course. It provides instructors with information about the writing abilities that pupils have mastered during a long time of instruction. The instructor, based on those data gathered, builds judgement on the pupil's performance in writing for which, he gives measurement which is defined as "the process that assigns numbers to assessment results (...). It is a quantitative description and it makes no statement about the quality of student's performance" (Orlich et al., 2010, p. 321).

1.3.2.2 Formative Assessment of Writing

Numerous definitions for formative assessment have been proposed by many scholars. Black and William (1998a) defined formative assessment as an encompassing all those activities undertaken by teachers, and/or by their students, which provide information to be used as a feedback to modify the teaching and learning activities in which they are engaged (as cited in William, 2011).

Unlike summative assessment which relies on grades to give quantitative description to the assessment results, formative assessment relies on giving feedback. In

the same vein, Tuttle (2009, p. 3) states that "in formative assessment, students do not receive a grade, but they do receive feedback that helps them to improve".

Heritage and Stigler (2010) considered formative assessment to be one of the effective teaching tools that a teacher can have. Many other scholars agree with this, and see that what makes formative assessment crucial in teaching writing is the formative feedback it provides and its effectiveness on students learning achievement. Moreover, Hattie (1998) emphasizes the importance of formative feedback and states that "it is the most powerful single moderator in the enhancement of achievement" (cited in Tuttle, 2009, p. 5).

The below figure presented by Tuttle (2009, p. 5) shows the various stages that formative assessment goes through when applied to writing.

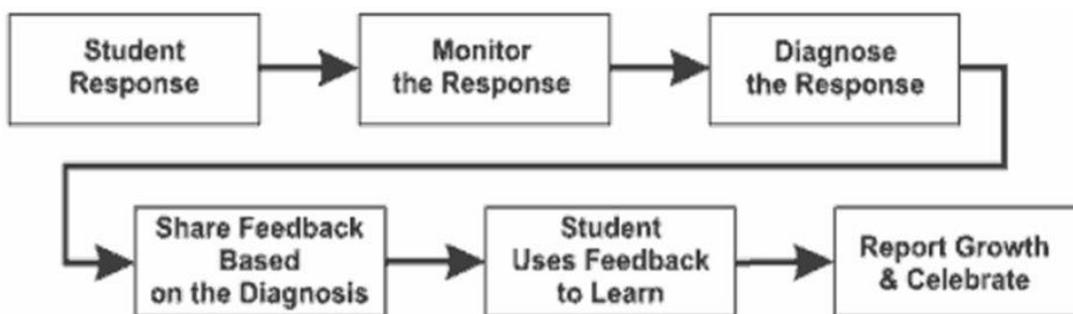


Figure 1.1: Formative Assessment Stages (Tuttle2009, adopted from Lieu, 2010).

Formative assessment has changed the writing process. According to Tuttle (2009), through the use of formative assessment, instructors can monitor the work of their students. Then, they diagnose the students' weaknesses. After that, students are given feedback to those weaknesses to guide them in their writing. Moreover, the instructors' interventions do not only occur at the late steps of the writing process. However, they occur constantly all along the writing process.

Furthermore, the effectiveness of formative feedback resides in that it motivates students to carry on writing because it makes them aware of the gap between where they are and the intended goal in addition to the solutions to bridge this gap. For this Tuttle (2013, p. 5) points out that "They (students) go from having a learning gap to a learning strength"; this clearly illustrates the importance of formative assessment in the students' writing development.

1.4. Writing Aspects

Fitzgerald (Hedge, 2005, p. 7) wrote "all good writing is swimming under water and holding your breath". This saying illustrates that even expert writers encounter difficulties and moments of frustration while writing. Moreover, "writing is a complex process with a number of operations going on simultaneously" (Hedge, 2005, p. 50). As a result of that, writing seems to be the most demanding and difficult skill that not only EFL students, but even natives of the English language still struggle in mastering this skill. Furthermore, as Trrible (1996, p.3) argued that "an ability to write appropriately and effectively is, however, something which evades many of us in our mother tongue or in any other languages we may wish to learn"; moreover, the difficulty of the writing skill may reside in that the writer strives to respect several aspects during the act of writing such as: grammar, spelling, vocabulary, punctuation, handwriting and many others .

1.4.1. Grammar

Accuracy is a vital element that approximately all EFL students focus on when writing. They believe that it cannot be achieved only by the implementation of the grammatical rules in their writing. Consequently, this may be a source of distraction, and

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eventually it may hinder their progression in writing. A question that arises what the term grammar stands for?

Linguistically speaking, grammar is the set of structural rules governing the composition of clauses, phrases, and words in a given natural language. The term refers also to the study of such rules, and this includes morphology, syntax, and phonology, often complemented by phonetics, semantics, and pragmatics (The Audiopedia, 2016).

Thus, grammar is a kind of a system that governs word formation, order and sometimes meaning that each language is equipped with. According to Harmer (2015, p. 22) "grammar can thus be partly seen as a knowledge of what words can go where and what form these words should take".

Native speakers of a language are unconsciously aware of a great range of grammatical rules. However, EFL students need more explicit instruction about those rules so then they will be able to apply them in their writing for this Harmer (2015) argued that "perhaps our greatest responsibility ,therefore, is to help our students develop their language awareness :their ability to spot grammatical patterns and behaviours for themselves" (p. 23).

1.4.2. Spelling

There are many educators who put great importance on the way ideas are communicated rather than the accuracy in spelling. Those educators think that giving extensive importance to the accuracy of spelling may diminish from the students' willingness to write. As a result, they become reluctant to write whenever they are assigned

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to because all their efforts will be then put on encoding each word accurately rather than conveying ideas in an interesting form (Huxford, Mcgonagle and Warren, 1997, as cited in Westwood, 2008, p. 2)

Despite the differences of views on the importance of spelling in a written work, there are several scholars who believe that good spelling is vital in education. For Harmer (2015), incorrect spelling may not impact the understanding of the written work. However, it may negatively affect the reader's opinion about the writer because poor spelling is perceived as lack of education or care (p. 362). In the same sense, Graham, Harris and Chorzempa (2002), Steward and Cegelka (1995) all think that poor spelling can impact students' academic performance in various ways because a written work with poor spelling may give the impression to the reader that the student is careless or less intelligent than the other students (as cited in Westwood, 2010, p. 2-3).

1.4.3. Vocabulary

Learning a foreign language implies learning its vocabulary. The latter is regarded as a crucial element in any language to convey meaning effectively. Willkins (1979, as cited in Thornbury, 2002) stated that "without grammar very little can be conveyed, without vocabulary nothing can be conveyed" (as cited in Hamdaoui 2016, p. 6). Moreover, Richard and Rodgers (1986) have attempted to define vocabulary. According to them, "vocabulary is a core component of language proficiency and provides much of the basis for how learners speak, listen, read and write" (p. 255). This definition illustrates the crucial role vocabulary plays in all language skills.

1.4.4. Punctuation

Intonation, pauses, stress, pitch, and many other ways are used to convey meaning in speaking. However, in writing all those factors are absent but replaced with the so called punctuation which can be defined as "the use of spacing, conventional signs, and certain typographical devices as aids to the understanding and the correct reading both silently and aloud, of handwritten and printed texts" (The Audiopedia, 2016). As a result, our written language cannot be understandable unless it is punctuated this is why punctuation occupies a vital position in English language and several languages.

1.4.5. Handwriting

Handwriting is the skill through which individuals express their thoughts, ideas and knowledge. Moreover, handwriting is considered by many scholars as one of the components of the written language such as Mather, Wendling and Roberts (2009) who provide the bellow figure in which they illustrated the various components of the written language. As illustrated, handwriting stands as an important component of the written language. Mather, Wendling and Roberts (2009) also provide a definition that clearly illustrates the vital importance handwriting receive in producing a piece of writing "handwriting is a fine-motor skill that enables students to record their thoughts. Rapid, legible and comfortable handwriting facilitates writing production" (2009, p. 8).

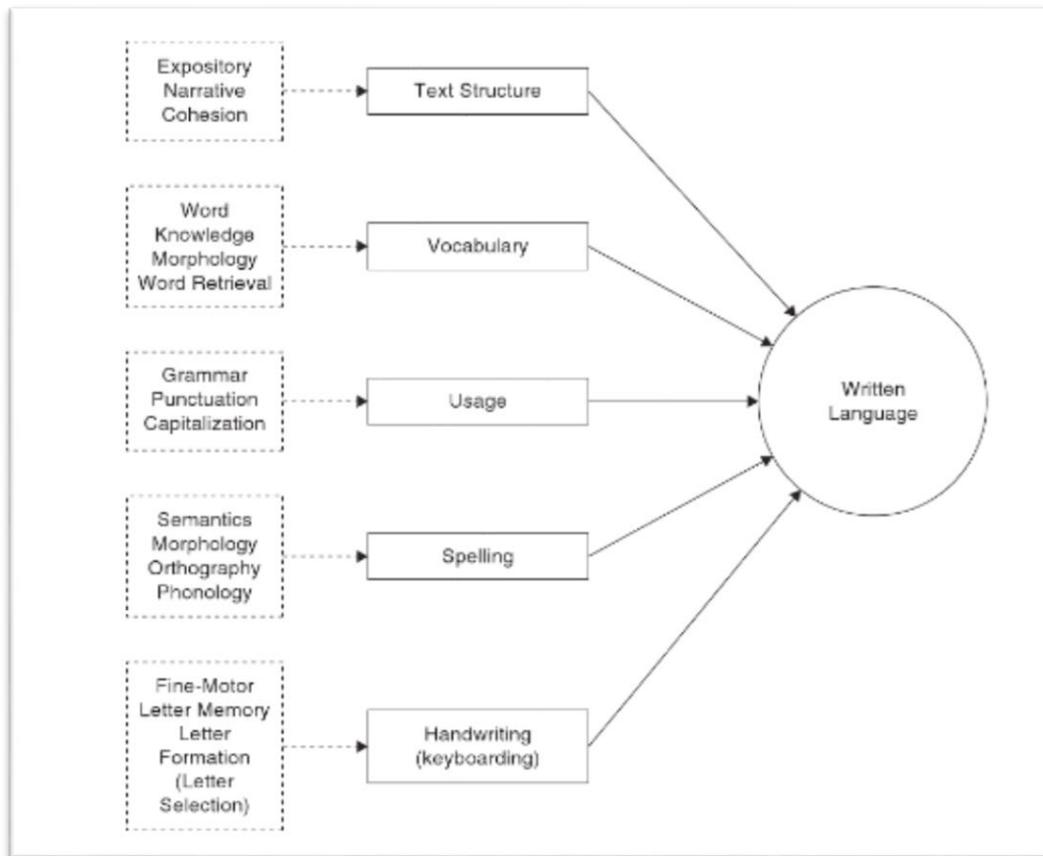


Figure 1.2: various components of writing skill. Adopted from (Mather, Wendling and Roberts, 2009, p8).

1.5. Definitions of Handwriting

There are numerous definitions for handwriting. According to wikipedia (2017),

Handwriting is a writing created by a person with a writing material such as a pen or pencil. Handwriting includes both printing and cursive styles and is separate from formal calligraphy or typeface because each person's handwriting is unique and different (para. 01).

To express it differently, handwriting is extremely personal and unique as an analogy. It can be considered as the person's finger print. Furthermore, Berninger (2008) states that "handwriting is a language by hand". To illustrate more, handwriting is a means

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of communication which relies on physical way and symbolic representations in order to communicate meaningful thoughts and ideas.

The enormous evolvement of technology has led it to invade many fields among which the educational one. Although technology has occupied a vital position in the educational context, handwriting, as shown in many recent research studies, remains as a crucial tool for retention of information. Sassoon (2006, p.11) asserts that "handwriting is not just a simple matter of letters neat or untidy. It is a physical act that involves not only the hand but the whole body. It interacts with other cognitive tasks and above all is affected by and in turn reflects the writer's emotions and attitude" . therefore, Sassoon does not solely consider handwriting as a tool through which the individual constructs letters; however, she considers it as a skill that includes several cognitive processes and reveals some aspects of the psychological parts of the writer .

1.6. The Importance of Handwriting

Nowadays, most of our communication is done digitally. Hence, it will be odd to wonder about handwriting. In this sense, Harmer (2015) states that "It may seem strange to worry about handwriting when so much communication takes place electronically" (p. 361). Moreover, although technology changed the way we communicate, handwriting retains its importance in our daily lives. In the same sense, Montgomery (2007, p. 32) asserts that "despite the widespread use of word processors and electronic mail a considerable amount of handwriting still takes place in the form of note taking, list making, examination writing and general communication purposes".

In the educational context, handwriting is the means through which students communicate their ideas. As Berninger (2008) states that "handwriting is the language by hand which is useful reminder of its context and purpose" (as cited in Sid, 2016, p. 8). In

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the same vein, Alston (1993) regarded handwriting "as an underpinning skill, essential if children are to succeed in writing and spelling. Thus any student who has not been able to develop a fast and legible script is at a disadvantage and likely to underachieve in school" (as cited in Montgomery, 2007, p. 35). Therefore, students who lack fluency and automaticity in their handwriting are more likely to show low educational achievement. Moreover, Richards (2009) asserts that "poor handwriting has negative impact on the success of students' progress" (as cited in Oche 2014, p. 2). To sum up, handwriting is not just a letter formation and it implies a number of cognitive processes ; moreover, it is considered by many scholars as a language through which knowledge is communicated. Hence, it occupies an important role in education.

1.7. Fine Motor Skills

One of the motor skills that plays an important role in handwriting is the fine motor skill. The latter is often used instead of the gross motor skills. However, they are completely different; for this McMoris (2014) differentiates between them and states:

Fine motor skills are rarely, if ever, found in sport and are skills which require the use of few limbs and are undertaken in limited space e.g. writing, typing and sewing. On the other hand, most sports skills require the use of several limbs, often the whole body, and tend to take place in a comparatively large amount of space. (p. 5).

Thus both motor skills have an enormous role in the educational and social lives, and with the evolvement of those skill, in such case, the individual will be able to improve or develop other skills.

Moreover, Pargman (2006) defined fine motor skills as "Movements that depend upon small muscles activity and emphasize accuracy" (p. 62). For this reason, they are vital in the handwriting skill because it is constructed of number of small muscles needed in writing.

1.8. The Role of Cerebellum in Automaticity of Handwriting

Handwriting is a motor skill that needs to be developed. Once it becomes automatic this allows the brain to process other aspects; as Stainthorp et al (2001) state that:

The skill of handwriting is not only one of the fundamental building blocks of literacy; it also provides children with access to other parts of the curriculum. [...]. An automatic style releases the brain to concentrate on other ideas i.e., spelling, grammar, syntax, style and content. (as cited in Montgomery, 2007, p. 35).

From the above definition two main aspects can be deduced. First, handwriting is seen as the indicative of literacy level. Second, individuals who lack automaticity in their handwriting are more likely have to put more focus and energy on all elements of their handwriting, thus they cannot maintain concentration over the other elements of the curriculum. Nevertheless, in the case when handwriting automaticity is obtained, individuals can provide their full energy and concentration to the part of the curriculum rather than their handwriting.

The cerebellum has a crucial role in all our movements. It does a number of different functions; however, one of its critical functions is that it works with the other motor structures in our nervous system, including the fine motor, to coordinate our

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movements (Jensen, 2014). In the same sense, Montgomery (2007) explains that all along our learning process new motor skills are required to articulate different movements.

Moreover, the cerebellum is responsible for the shadowing of these motor skills and help with its execution. The process of shadowing allows the cerebellum to record all the complex muscular actions and eventually those movements become much more spontaneous and unconscious leaving the brain to deal with other cognitive processes (Montgomery, 2007, p. 36).

Consequently, the cerebellum's processes of shadowing and recording helps in memorization and refinement of the fine motor skills involved in handwriting, therefore automaticity in handwriting is accomplished. Hence, the brain is released to deal with other procedures as Montgomery (2007) states "it soon begins to take over control of the operation and this leaves the main brain free to think about new things" (p. 36). All in all, the cerebellum has a critical role in the automaticity of handwriting, and the latter allows the brain to deal with new various processes and aspects.

1.9. Handwriting Styles

1.9.1. The Print Style

Print is one of the handwriting styles which is generally defined as separate and individual symbols or characters which are then lined up one after another to form words. In many schools nowadays, the print style works as the style that paves the way for cursive, because it is thought that print is much easier and neater. Brown (1999) asserts that "the print form leads smoothly into a joined style that is rational, consistent and easy to accomplish" (p. 131).

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One of the main reasons that drives schools to initiate teaching handwriting using the print style is that most of the books and educational materials use printing. As Montgomery (2007) states that "because children's stories and reading schemes were in print script, it encouraged teachers to teach it in reception and then introduce joining as soon as a neat print had been achieved" (p. 37). Thus, the pupils have to change their print style, once they manage using it, which means that they have to develop a new one which may be extremely difficult for them; as Montgomery (2007) stated that "unfortunately, this means that children are being taught to develop one set of programmes then must change to another. This is easy for some, but it is hard for many" (p. 38).

Additionally, switching from print to cursive implies using new set of movements which the cerebellum has to adapt with and memorize after it has already learnt those related to print. Montgomery (2007) argued that "once the cerebellum has learnt the print form, learning cursive means learning new set of motor programmes. The former is not a step on the way to the latter" (p. 39). Eventually, many scholars believe that schools should be consistent in teaching handwriting as Richards (Montgomery, 2007, p. 38) states "start as you mean to go on".

1.9.2. The Cursive Style

Cursive or joined style is distinct from print style, and the distinguishing characteristic of cursive is that it is connected writing. The word cursive comes from the 18th century and it traces its roots to the Latin word 'currere' which means 'to run' (Encarta World English Dictionary, 1999). This clearly illustrates why cursive was developed at the first place and that is to write faster and in a smoother way.

Cursive is considered faster than print due to that it allows hand movement to flow very easily among letters without taking the pen off the paper only after writing the whole

word, while print involves lifting the hand in each letter. Moreover, letters in a word are linked by the so called ligatures which are defined in the field of typography as the connections between letters or glyphs (Herrmann, 2016); every letter starts and ends in a ligature which enables it to be connected to other letters.

1.10. Pencil Grasps

Poor handwriting is the result of many factors and what individuals are unaware of is that their poor handwriting is a consequence of their manner of holding the writing utensils which is referred to a pencil grasp . Sassoon asserts this "the way you hold your pen affects your handwriting more than you realise" (2006, p. 26). In the same vein, Henderson (2006) states that "letter production skills can be influenced by the way the writer grips a writing tool (p. 330). Therefore, there are several ways the individual can grasp a pencil; among which there are some that are considered efficient or functional grasps, while others are assumed to be inefficient or maladaptive grasps. The dynamic tripod, the quadripod and the adaptive are three examples of the functional grasps which are illustrated in (Figure 1.3).

1.10.1. The Dynamic Tripod Grasp

The tripod grasp is considered as one of the functional and mature grasps. Curtis and Newman (2015) provided a description to the tripod grasp as follow "a tripod grasp is achieved by holding a writing tool when the thumb and index finger are placed gently on either side of the pencil with the middle finger resting underneath while the ring and little fingers rest on the palm" (p. 246). The dynamic tripod grasp is believed to be the most efficient grasp among all others because it is believed that it allows the hand and fingers to move freely while handwriting this what makes it the most appropriate to handwrite with.

1.10.2. The Quadripod Grasp

The tripod grasp is thought to be the efficient pencil grasp ; however, there are several efficient pencil grasp patterns such as the quadripod grasp which is also considered to be among the functional grasps. the OT Articles provided a description of the quadripod grasp as follow "The pencil is held with the tip of the thumb, index finger, and third finger and rests against the side of the fourth finger. The thumb and index finger form a circle" (OTPlan, 2017, para. 4). This pencil grasp is illustrated in (Figure 1.3)

1.10.3. The Adaptive or D'Nealian Grasp

The adaptive grip is another efficient pencil grasp that is very beneficial for those with weak fine motor skills. According to (OTPlan, 2017), the pencil is held between the index and third fingers with the tips of the thumb and index finger on the pencil. The pencil rests against the side of the third finger near its end. (para. 5).

The below figure illustrate the three efficient grasp.

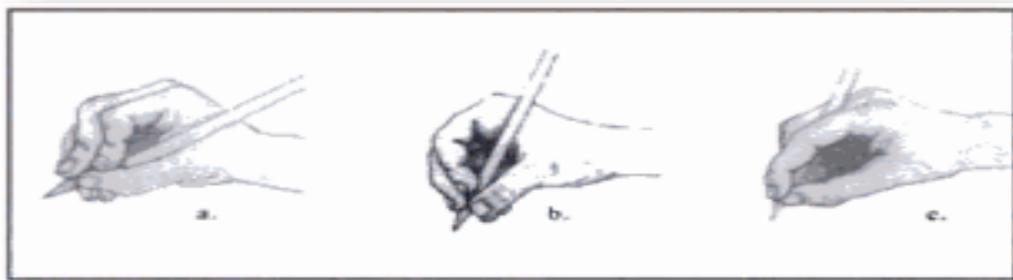


Figure 1.3: Mature efficient pencil grasps. a. Mature tripod, b. dynamic quadrupod, c. alternative pencil hold (Sassoon), also called adapted (Benbow), D'Nealian (Thurber), Marks' hold (Admunson), and arthritic penhold. Illustrated by Jessica Cammaroto. Adapted from Curtis and Newman (2015, p. 246).

1.11. Legibility versus Readability

When writing any piece of production, one should strive to make it clear and understandable for the reader. In this sense, Hadley (1996, p. 4) stated that "Not all work needs to be written in one's best handwriting". Nevertheless, we all care about the readability and legibility of our handwriting when our written productions is intended to be read by others.

When searching for the difference between readability and legibility, the researcher found that they are used interchangeably, and sometimes are considered synonyms. Therefore, any attempt to distinguish between these two concepts will eventually end up that both terms are approximately the same. However, Gilchrist (1997) attempts to distinguish between them and states:

Legibility is defined in terms of letter formation, alignment, spacing, sizing and slant. Any one of those may affect the readability of a sample of handwriting, but when two or more components are combined, the legibility of the handwriting sample maybe seriously affected. (p. 118).

Additionally, according to Oxford English living Dictionaries (2017), Readability is defined as the quality of being legible or decipherable, i.e., the quality of being easy or enjoyable to read whereas legibility is the quality of being clear enough to read. Thus, one can say that the readability of one's handwriting may depend, to a some extent, on legibility, while the opposite is untrue.

1.12. Factors Affecting Handwriting

1.12.1. Writing Posture

According to Sassoon (2006), the term writing posture does not only refer to how pupils sit, but also refers to the way pen is held, paper position and so on and so forth

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(p. 8). Moreover, handwriting calls for the involvement of all parts of the body. For this reason, body posture is vital. Budgell and Ruttle (2003) provide a description for the ideal body posture as follows:

The ideal posture for handwriting is for the child to be seated with their feet flat on the floor and their bottom at the seat so their lower back is supported by the back of the chair. From this position, they should be able to achieve good balance and maintain the core stability upon which all of the other muscles rely (p.7).

The following figure shows the right way/position that pupils should respect if they would ameliorate their handwriting.

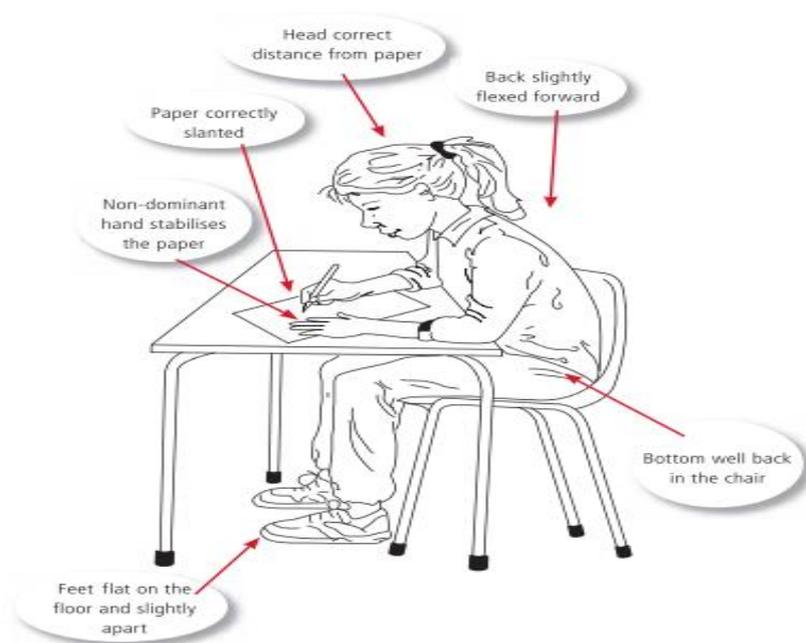


Figure 1.4: The Appropriate Sitting for Good Handwriting. Adopted from (Goves, 2006, p. 22).

1.12.2. Pen Hold / Pencil Grasps

Pencil grasp is one of the major factors that influences handwriting. As Block (2003) states that "many handwriting difficulties stem from improper sitting posture, pencil grip, paper placement or from insufficient teaching of letter formation" (cited in Westwood, 2013). The pen itself and the way it is held may have an impact on handwriting and alter the letter forms. In this sense, Henderson and Pehoski (2006) assert that "letter production skill can be influenced by the way the writer grips a writing tool" (p. 330). Furthermore, Johnson (1976) said that "by the age of ten, grip will have been properly well established" (as cited in Ott, 1997, p. 86). Hence if pupils do not develop correct and functional pencil grip, they will end up having inefficient or maladaptive pencil grasps; consequently, they will face difficulties in their handwriting.

Pupils should be taught the correct and functional way to hold a pen because it is thought that "incorrect pencil hold is a life-long habit. Incorrect pencil hold is very difficult to remedy"(Ott, 1997, p.86). However, there are ways with which handwriting can be enhanced and adjusted such as pencil grips; "pencil grips are devices which are fitted to the barrel of the pencil and which help the pupil to hold his pencil correctly" (ott, 1997, p. 87). The bellow figure shows two types of pencil grips; the triangle-shaped pencil grips and the finger-mould pencil grips.

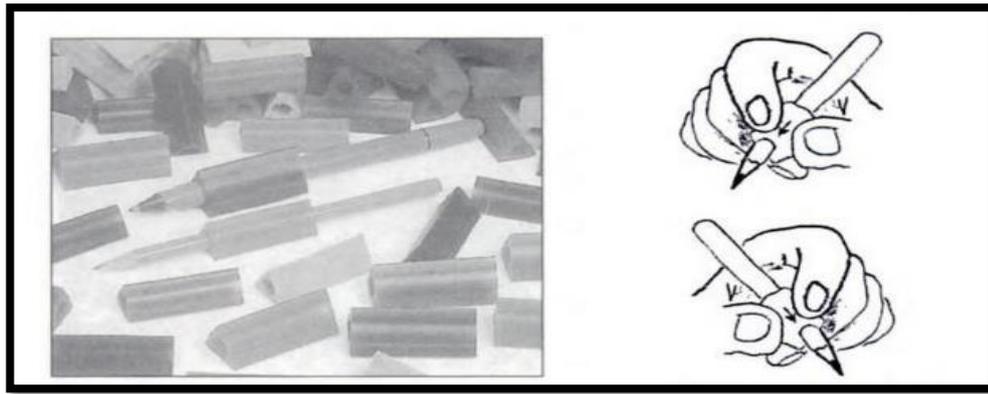


Figure 1.5: the triangle-shaped pencil grips and the finger-mould pencil grips. Adopted from (Ott, 1997, p. 87).

1.12.3. Furniture and Paper Position

Handwriting is a motor skill that involves the whole body. Hence, body posture needs to be appropriate in order to ensure comfort during writing. The body posture affects writing performance to a great extent. For this reason, Sassoon (2006) emphasized that "teachers should be aware of the impact of furniture on their pupils' written production". She also added that "it is important to be aware of the importance of furniture and the effects of inappropriate chairs or tables on children's posture, comfort and eventually their writing performance" (p. 30). Thus, according to Sassoon, poor handwriting may be the result of the inappropriate furniture which has a negative influence on the body posture.

Hadley (1996) believes that paper position is very crucial in handwriting; moreover, she assumes that appropriate paper position allows writers to see what they are writing. Furthermore, Ott (1997) emphasized the role of the teacher in the correction of paper position of his/her pupils "teachers must show the pupil where to place the paper on his desk" (p.87).

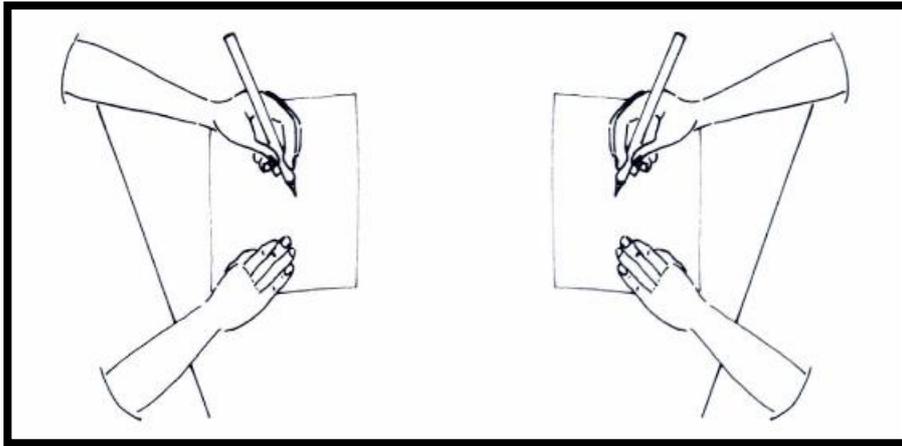


Figure 1.6: paper placement for the left hander and the right hander. adopted from (Hadley, 1996, p. 11)

In the above figure, Hadley (1996) illustrates the appropriate paper positions for left handers and right handers. She states "Right handers should have their papers to the right of their body's midline and left handers on the left" (1996, p. 10).

1.12.4. Spacing

Spacing is crucial in handwriting, and the space is not concerned only with the margin, but also words and lines. As Brook (2010) states that "in addition to the margins as assigns of the generosity or frugality of the writer, the space which appear between the lines of handwriting and the words are also significant" (p. 13). Moreover , Morris and Morris (2000, p. 95) state that relative spacing is divided into four parts as follows:

- Between words.
- Between the name and initials in a signature.
- Between letters within a word.
- Between lines of writing in an extended body of writing.

Additionally, Hadley (1996) states that inappropriate spacing may be the consequence of tension which is the result of too much pressure causing the pencil to jerk

(1996, p. 19). All in all, handwriting requires appropriate spacing in order to be considered good handwriting and to enhance its readability.

1.12.5. Memory and Handwriting

Numerous research studies have proved that handwriting enhances and improves memory. Many researchers agree with this such as Budgell and Ruttle (2006) who said that "handwriting enhances memory the same impact have not been found with keyboarding skill" (p. 15). This is because of the complexity of the handwriting skill and that it is considered a multi sensory nature that involves kinaesthetic, auditory and visual information; as Budgell and Ruttle (2006) stated that:

Handwriting itself depends on memory: kinaesthetic memory for the formation of letters, auditory memory for the key features of each letter, sequential memory for the sequence of letters, and working memory to recall letters we need to write (p. 15).

Hence, the skill of handwriting plays a critical role in boosting the memory and in activating brain areas which are cannot be activated when typing.

1.12.6. Vision in Handwriting

Handwriting involves the visual motor integration; the latter implies the communication between the eyes and hands. Thus, vision plays a large role in the handwriting skill and this is what Sousa (2001) asserts in the following:

When an individual is writing, the visual feedback mechanisms are at work checking the output, adjusting the fine motor skills, and monitoring aye-hand coordination. Meanwhile, kinaesthetic

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monitoring system are conscious of the position and movement of fingers in space, the grip on the pencil, and the rhythm and pace of writing ... Accomplishing this task [also] requires visual memory for symbols, whole-word memory and, spelling rules (as cited in Westwood, 2013).

It can be said that vision takes control over most of the interrelated processes of handwriting. Moreover, having problems in vision will certainly affect handwriting and the learning process in general as asserted by Sassoon (2007, p. 107). According to her, severe visual problems can distort and disturb pupils' performance not only in handwriting but in many other areas, resulting in needless misery and waste of potential.

1.12.7. Dysgraphia

There are factors other than those which are external that may affect handwriting which have to be taken into consideration in the process of ameliorating and teaching handwriting; for this Montgomery (2007) said that "if we are to improve handwriting and handwriting teaching. For example, some clinical diagnosis is also necessary as part of a more rounded approach to intervention or to deciding whether handwriting should be taught at all in the most severe cases" (p. 43-44). Accordingly, Westwood (2008, p. 67) agrees with Montgomery (2007) in the idea that the disabilities such as dysgraphia are very challenging for pupils who suffer from these kinds of disabilities as well as for teachers who are constantly attempting to aid their pupils. He states that "dysgraphia is believed to be due primarily to neurological causes rather than to lack of teaching or practice".

In general, dysgraphia is viewed as illegible handwriting. However, Westwood (2008, p. 67) defined this term as follows "dysgraphia is the pseudo-clinical term used to

describe a specific disability in writing that is more severe, and more resistant to remediation than the general difficulties encountered by other weak writers". In addition to that, Van Galen (1993) agrees with Westwood (2008) and states "dysgraphia is not the result of poor instruction or lack of training" (as cited in Lane, p.111). Thus, he believes that dysgraphia is not the result of bad instruction.

1.12.8. Affective Factors

Several researches have emphasized that the affective factors are crucial in learning, and that the human brain is not merely cognitive information processing system; however, it is a system in which the affective functions and cognitive functions are integrated (International conference on hybrid learning, Fong, Kwan, & Wang, 2008, p. 183). Thus, it can be said that the those factors are influential in learning and even in our cognitive behaviours.

Various affective factors can have an impact on pupils' handwriting such as anxiety which is defined by Eysenck as 'an aversive emotional and motivational state occurring in threatening circumstances' (as cited in Bassis, 2015, p. 350). For this reason, anxiety increases among pupils during examination ; moreover, this psychological state decreases from the effectiveness of performing cognitive tasks as stated by Bassis (2015, p. 350) ;as a consequence, pupils' poor handwriting may be the result that they experience anxiety during examination or written task.

According to Montgomery (2007), issues in handwriting may result from anxiety or other genetic factors; for this, he states:

There are some children who are suffering distress and who are extremely anxious and this can sometimes be seen in their writing which may be very small or very faint, with words running together

and a tiny tremor seen in all the strokes. There are of course some minor hand tremors which run in families which also cause the handwriting to wobble (p. 62).

Apart from anxiety, there are other affective factors that influence pupils' handwriting; as stated by Gilchrist (1997, p. 117) 'the child's self-concept, interests, behaviours and motivation, affect their performance of handwriting. Therefore, it can be concluded that affective factors such as anxiety, low motivation and self-esteem are all causes of poor handwriting.

1.13. Teaching Handwriting

Writing is a communicative skill that everyone has to develop. However, this cannot be achieved only through the mastery and the development of its elements or aspects including: vocabulary, grammar, word structure, spelling, and handwriting. This latter is crucial for making one's writing clear and easy to be understood. It is also considered to be the main element that should be developed since early age and that cannot be realized only under the guidance and the supervision of parents, teachers and/or any person who is more competent. In this sense, Sassoon (1983) stated that:

Handwriting is a taught skill, nothing about it is natural. It is a motor skill. This means that the body learns, then automates the movement of the hand and arm which in turn produce the written trace. Once a movement is automated, it is very difficult to alert. For this reason, it is very important to have an efficient method of teaching handwriting right from the beginning (as cited in Bently et al., 1999).

Hadley (1996, p.14) considers the willingness of pupils as a vital element in teaching. Moreover, Sassoon (2003) believes that there are different approaches to

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teaching handwriting with which the teacher can come across each pupil's preferable way of learning handwriting. She states that "children learn in different ways, some take in visual information best, some need extra kinaesthetic feedback while others need actions to be described orally" (p. 50). The last category is the hardest one to deal with because handwriting is a kinaesthetic skill in nature. However, the last category seems to be reluctant when it comes to practice handwriting movements; they find such kind of activities boring and not enjoyable.

One other important element in teaching handwriting is that consistency or style. As Browne (2002, p.76) states that "schools may have individual preferences about the style they choose. The important point is that one style is taught and modeled consistently throughout the school". Thus, whatever the style chosen has to be maintained and modeled.

Generally speaking, pupils are not aware of the vital importance of improving their handwriting, and that poor handwriting can be the cause behind their underachievement in education. For this teachers should strive to make their pupils aware about the role of handwriting in the educational achievement. Furthermore, Boyle and Scanlan (2010, p. 230) assert that "it is essential that teachers provide formal instruction in handwriting early as a part of students' daily or every-other-day routine, so that students can eventually become fluent writers".

1.14. Assessing Handwriting

Assessment is a crucial part of instruction. Hadley (1996) defined assessment as "a part of record keeping but it is also constructive in helping the pupil to move forward whatever the subject being assessed" (p. 17). It can be said that without assessment instruction is done in vain. Apart from this, Handwriting, like any other subjects, needs to

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be assessed. In this sense, Lee and Potwood (2004, p. 37) consider handwriting as a complex skill to be learned or taught. Moreover, Hadley (1996) believes that assessment is not done randomly; she said that the main criteria for assessment must respect the following:

- Are the basic movements correct?
- Does the child start and finish the letters in the right place?
- Does the writing flow? Is it rhythmic?
- Are the words appropriately spaced?
- Is the grip correct?
- Is the angle of the paper and the child posture satisfactory?

Gilchrist et al. (1997) emphasized the process of gathering information from multiple sources such as the child's neuromotor development, cognitive and psychological behaviour, environmental factors and skill acquisition. This is for identifying the difficulties that pupils are encountering and that prevent them from producing legible handwriting (p.113).

Gilchrist et al. (1997, p.113) and Hadley (1996, p. 17) consider close observation of pupils' behaviour and individual discussion as vital tools in assessment in the sense that they provide teachers with valuable information about pupils' performance. Moreover, they make pupils aware of the important elements that they are being assessed on. Thus, they will direct their attention towards what is best for the improvement of their handwriting.

Conclusion

In this chapter, we have presented a theoretical background about writing as well as handwriting. Firstly, we have introduced some definitions about writing related to various terms such as: system, skill, process and genre. Then, we dealt with writing assessment which is done based on certain writing aspects among which stands handwriting as a vital aspect of writing. After that, we spot light on handwriting and highlighted its definitions, importance, its different styles, and the various factors that affect this skill. Finally, we dealt with teaching and assessing handwriting to stress that instruction plays a vital role in enhancing handwriting which is a crucial skill in academic success.

Chapter Two: Reading

Comprehension

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Introduction

Reading is viewed as a complex activity. It allows us to develop and expand our knowledge. In addition, it is one of the outstanding skills that allows language users to gain language proficiency. Thus, it plays a large role in ameliorating the other language skills. This chapter is divided into two parts. The first part is an attempt to introduce the term reading by providing different definitions. Then, we will deal with the different models of reading namely: The bottom-up, the top-down and the interactive models. After that, we will present the various types of reading: Skimming, scanning, extensive and intensive readings. The second part will be devoted to reading comprehension in which, first, we will yield attempt to give various definitions of reading comprehension yielded by several scholars. Second, we will tackle the different strategies of reading comprehension. Eventually, we will deal with the different processes involved in reading comprehension in addition to the factors that affect reading comprehension.

2.1 Definitions of Reading

Many researchers in various fields have attempted to provide a definition to the reading skill. However, an exhaustive and thorough definition that encompasses all the reading aspects seems impossible to be achieved. Dechant (2009, p. 5) claims that definitions of reading are divided into two types. First type is reading as interpretation of experience and the second type which is reading as an interpretation of graphic symbols.

2.1.1 Reading as an Interpretation of Experience

In this type of definition, reading is viewed as the interpretation of sense stimuli. For this, Spencer (1946) noted that "in the broader sense, reading is the process of interpreting sense stimuli... reading is performed whenever one experiences sensory stimulation" (as cited in

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Dechant, 2009, p. 6). Moreover, Smith believes that "reading is the most natural activity in the world" (2004, p. 2) in the sense that reading is not only decoding graphic symbols. However, it goes beyond this to encompass a vast number of our daily activities as Smith (2004) states:

We read the weather, the state of the tides, people's feelings and intentions, stock market trends, animal tracks, maps, signals, signs, symbols, hands, tea leaves, the law, music, mathematics, minds, body language, between the lines, and above all—a point I must come back to—we read faces. "Reading," when employed to refer to interpretation of a piece of writing, is just a special use of the term. We have been reading—interpreting experience—constantly since birth and we all continue to do so (p. 2).

According to Dechant (2009, p. 5) ,we are readers of experience prior to become readers of graphic symbols and that thanks to our experiences we can give meaning to those graphic symbols.

2.1.2 Reading as Interpretation of Graphic Symbols

In the view of reading as an interpretation of experience, we are concerned with what is called the semasiographic symbols. However, we are not concerned with such readings; our concern is the reading of written language which uses the glottographic symbols. The glottographic symbols and semasiographic symbols are two distinct types of symbols made by Sampson (1985). To illustrate more, the former are the symbols that represent language, while the latter are the symbols such as the road signs which do not really represent language (as cited in Urquhart &Weir, 2013, p. 14).

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Reading is perceived by Goodman (1988) as "matching sounds to letters" (as cited in Carelle, Devine and Eskey, 1998, p. 11). According to him, reading is word identification which is a matter of pronouncing the words encoded using graphic symbols. Moreover, Dechant (2009, p. 7) identifies three basic processes of word identification which are:

- 1- Visual discrimination and identification of symbols.
- 2- Visual memory for the symbols.
- 3- Association of sounds with the symbols.

Dechant illustrated these basic processes in (Figure 2.7) bellow.

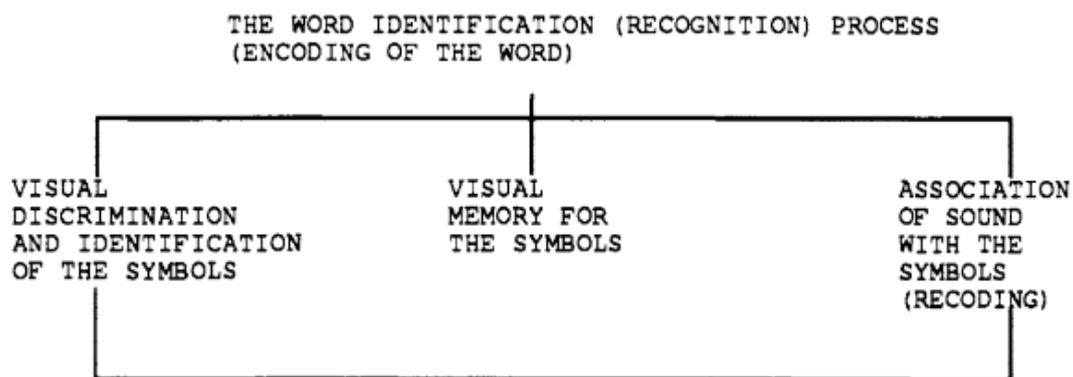


Figure 2.7: The Word Identification ‘Recognition’ Process ‘Encoding of the Word’ adopted from (Dechant, 2009, p. 7)

A definition such as Goodman’s (1988) diminishes from the complexity of the reading skill because reading is not simply a question of word identification or recognition. However, it is much more complex than this. For this, Dechant (2009) argued that "reading is more than word identification’ he continued ‘reading is more than the ability to identify or to pronounce the words on a printed page, or to go from the graphic to the spoken code". Furthermore he made the distinction between two vital terms in reading which are recording and decoding. The former implies the association of words or letters to their sounds, and the latter refers to the ability to construct meaning encoded in graphic symbols.

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Moreover, other studies came to stress what Dechant (2009) came up with and emphasize the importance of building an accurate account of what is being read rather than just word recognition; such as Carelle, Devine and Eskey (1998) who agree with the idea that reading is much more than just word recognition:

Reading is a receptive language process. It is a psycholinguistic process in that it starts with a linguistic surface representation encoded by a writer and ends with meaning which the reader constructs there is thus an essential interaction between language and thought in reading (p. 12).

Eventually, as stated earlier a thorough definition of reading cannot be achieved due to the complexity of this skill. Yet the comprehension of meanings remains the central purpose of reading (Dechant, 2009, p. 9).

2.2 Types of Reading

Individuals may read for different purposes, and the latter determine the way a person reads a material. For this, there are several types of reading mentioning: skimming, scanning, extensive and intensive readings.

2.1.3 Skimming versus Scanning

Generally, we do not read the materials that we encounter in the same way; our readings differ depending on what we are reading and for what purpose. Skimming and scanning are two different types of reading, yet they are both not meant to obtain a deep understanding. Londale and Lewis (2007) state "when you skimming or scanning you are not trying to read for in-depth comprehension" (p. 40-41).

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Skimming and scanning seem to be approximately the same. However they differ in their processes and purposes; in one hand, again, when we skim we are not aiming for deep level of comprehension, and we just want to obtain the main idea in a short time. Moreover, skimming is done when the individual is encountered with a vast amount of information from which a general idea must be obtained in a given time. For this reason, when skimming the reader moves rapidly through the pages and pay special attention to typographical cues-headings, boldfaces and italic type, indenting, bulleted numbered lists (Skimming and Scanning-tip sheet, 2016).

In the other hand, scanning may appear similar to skimming in the sense that both are done in an extremely short time. They use key words and organizational cues, but the main difference between them is that scanning is pre-directed because when we scan we are reading to extract specific information (Lu, 2013, p. 201).

2.1.4 Extensive Reading versus Intensive Reading

Extensive and intensive readings are often viewed as two opposites. However, they are not. This is because each one of which has its own functions and purpose. Carrell and Carson (1997) and Nuttal (1996) assert that "Intensive and extensive reading should not be seen as being in opposition, as both serve different but complementary purposes" (as cited in Richards and Jack, 2002, p. 296).

In one hand, intensive reading, as the name suggests, is reading intensively for details. This type of reading calls for thorough understanding of the reading material. For this reason, Alcandra, Espina, Villamin and Cabanilla (2003) believe that intensive reading is "characterized by deliberate attention and deep concentration. It is reading for details. It is aimed at perceiving implications. It is concerned with a profound and detailed understanding of the text" (p. 97). Moreover, this type can be viewed as a thorough

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analysis of language in terms of language structure as well as understanding meaning, this is what is clearly illustrated by Palmer (1964) who assumes that "intensive reading implies [taking] a text study it line by line referring at every moment to our dictionary and our grammar, comparing, analysing, translating, and retaining every expression that it contains" (as cited in Day and Bamford, 2012, p. 5).

In the other hand, extensive reading or the so called pleasure is defined as "the reading of long texts, usually for one's own pleasure. This is fluency activity, mainly involving global understanding" (Grellet, 1981, p. 4). Thus, extensive reading, unlike intensive reading, pays attention to the content rather than the language; in addition, it does not concentrate on details as much as intensive reading.

2.3 Models of Reading

Theorists have yielded several models of reading in an attempt to illustrate what actually occurs during the act of reading. Moreover, the bottom-up, the top-down and the interactive models seem to be the most eminent models as Harris and Sipay (1985) suggests that most reading models can be categorized as primarily bottom-up, top-down, or interactive (as cited in Manzo & Manzo, 1990, p. 22).

2.3.1 The Bottom-up Model

The bottom-up model is a traditional view of reading in which readers are expected to go through series of hierarchically ordered sub-skills in order to construct meaning. Manzo and Manzo (1990) point out that:

Bottom-up Models of the reading process can be said to be 'text driven'.

These models emphasize reading as a process of getting meaning from the printed page. This is accomplished according to these models, through

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sequential mastery of a series of 'reading sub-skills. The first step is accurate visual perception or recognition of letters, then of sounds, then of words and eventually of sentence and passage meaning (p. 15).

Thus, this implies that the act of reading involves series of processes that require sub-skills such as recognizing letters and words, recording them and eventually decoding them so that the meaning can be obtained.

2.3.2 The Top-down Model

The previous model eliminates the role of the reader in the act of reading and simply considers reading as word recognition. Alderson (2000, p. 17) argued that "readers in the bottom-up model are passive decoders of sequential graphic-phonemic-syntactic-semantic system, in that order". For this reason, came Goodman (1969) and Smith (1971) to emphasize the role and the importance of the contribution of the reader in the act of reading. Furthermore, according to Goodman (1970, 1984) and Smith (1978):

The top-down models of reading process tend to be 'meaning driven'. The reader is said to begin with prior knowledge and actively to compare what is read to what is already understood. Top-down models tend to de-emphasize sub-skills and literal understanding and to focus on building background information and personal responding.(as cited in Manzo and Manzo, 1995, p. 16)

It is true that the top-down model have integrated the prior knowledge of the reader in the act of reading in order to construct meaning and comprehension of the text. In this sense, Boyle and Scanlon (2010) stated that "this model [the top-down model] espouses that reading is very much an 'active process' whereby the reader uses background

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knowledge, including personal experiences, to form or shape meaning while reading the text" (p. 150).

However, Rumelhart (1977) came up with the interactive model of reading and that because he thinks that reading is neither a bottom up nor a top-down process. Yet, it is a process in which both models are involved either simultaneously or alternately (as cited in Tracy & Morrow, 2006, p.205).

2.3.3 The Interactive Model

According to several theorists, neither the bottom-up model nor the top-down model can allow readers to obtain sufficient information which leads to comprehension of the reading material. As a result, Alderson (2000, p. 18) asserts that "more adequate models are known as the interactive models, in which every component in the reading process can interact with any other component, be it 'higher up' or 'lower down'".

Furthermore, the interactive model is thoroughly explained by Browne (1998) as follows:

In this model readers are seen as approaching texts with the expectation that they are meaningful. They use their familiarity with the subject matter, their previous experience of written material, their knowledge about reading and their expectations of meaning to make predictions about content and words. Simultaneously readers use their knowledge about letters, sounds, words, and syntax, the cues which arise upwards from the page (p. 9).

To sum up, from the above discussion, it can be said that the interactive model of reading is the process that allows readers to decode the linguistic units of the texts as well

as to construct meaning through interpretation which is based on prior knowledge, and that is because within this model the bottom-down and the top-down models of reading are working together to achieve comprehension.

2.4 Definitions of Reading Comprehension

Reading comprehension is the ultimate aim of the act of reading. It is the skill by which readers make meaning to written text. Moyle (1972) asserts that "reading comprehension is the skill to extract knowledge or reading with understanding" (as cited in Tennent, 2015, p. 22). Moreover, reading comprehension is not concerned with word reading which is the ability to translate the printed words into sounds. However, as Cain (2010, p. 3) claims that "it is concerned with retrieving the sense of individual words, combining clauses to make sentences, and make meaning from successive sentences and paragraphs". To illustrate more, one can say that reading comprehension pays much more attention to the overall understanding rather than the meaning of words in isolation.

Furthermore, Snow (2002, p. 11) defines reading comprehension as "the process of simultaneously extracting and constructing meaning through interaction and involvement with written language". He used the words extracting and constructing to emphasize both the importance and the insufficiency of the text as a determinant of reading comprehension. This latter entails three elements:

- The reader who is doing the comprehending
- The text that is to be comprehended
- The activity in which comprehension is a part.

Snow (2002, p. 11) explained the three elements of comprehension. The first element, the reader, encompasses all the capacities, abilities, knowledge, and experiences

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that a person brings to the act of reading in order to construct meaning; since the text is not sufficient to do so. The second element, text, he claims that it is any printed material. The third element of comprehension includes the purposes, processes, and consequences associated with the act of reading.

Eventually, Durkin (1993) claims that reading comprehension is a deliberate process of thinking and defines reading comprehension as "intentional thinking during which meaning is constructed through interactions between text and reader" (as cited in Schwanenflugel and Knapp, 2016, p. 166). In the same sense, Harris and Hodges (1995) also stressed the interaction between the two elements of comprehension, namely the reader and the text. They state that "reading comprehension is the construction of meaning of written text through a reciprocal interchange of idea between the reader and the message in a particular text" (as cited in Tennent, 2015, p. 23).

2.5 Strategies of Reading Comprehension

While readers attempt to construct a clear comprehension of the text obstacles may arise; for this reason various studies have yielded a vast number of comprehension strategies in an attempt to help poor readers to get rid of those obstacles that they encounter during reading.

2.5.1 The Bridging Inferences

It is extremely crucial for any reader to be able to link information from various parts of the text by using the bridging inferences comprehension strategy. According to Magliano and Millis (2003) the bridging inferences or the text based inferences strategy is viewed as 'the process of generating bridging inferences plays an integral role in helping the reader build a global representation of the text' (as cited in McNamara, 2007, p.479).

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Moreover, Beck, Mckeown, Sinatra and Loxterman (1991) define the inference strategy as ‘the ability to link concepts and ideas is especially important when one considers that many texts do not explicitly link related information’ (as cited in McNamara,2007, p.478-479). This strategy proved its effectiveness because it allows readers to make connections among information which are in different parts of the text, and which are not necessarily stated explicitly.

2.5.2 Visualization

Visualizing or the so called imagery is one of the vital comprehension strategies. It involves readers using mental images in order to fulfil understanding of the reading material. Research done in the area of imagery has been promising because the visualization strategy has shown its effectiveness on the remembrance and understanding of the participants who were using this strategy (Center, Freeman, Robertson & Outhred, 1999, McCallum & Moore, 1999, Oakhill & Patel, 1991, as cited in McNamara, 2007, p. 484). Finally, it is thought that this strategy is beneficial for poor readers and that in the sense that when they produce images related to what they are reading this will eventually help them process and comprehend the text in-depth; thus better understanding and comprehension is achieved.

2.5.3 Prediction

Prediction or the so called forward inference has a strategic role in reading comprehension. It implies using prior knowledge about a topic of the reading material, and integrate it with the new information in the text ; as Laing and kamhi (2002) stated that ‘a predictive inference directs the reader’s attention by speculating about events or actions that may occur base on what the reader already knows’ (as cited in Woolley, 2011, p. 108)

2.5.4 Comprehension Monitoring

Comprehension monitoring strategies play a crucial role in reading comprehension. Moreover, they are defined as the strategies that "allow us to monitor or keep tabs on our learning. They help us monitor our progress in mastering the material and allow us to evaluate the effectiveness of the strategies that we use to gain that mastery" (Blerkam, 2009, p.109).

In one hand, monitoring takes place before reading within which readers think about what they already know about the topic. In addition, they pay attention to the text structure and make speculations about what will be tackled in the text. In the other hand, during reading, within which readers check whether their prediction and prior knowledge goes with the text (McNamara, 2007, p. 471). And in the other hand, comprehension monitoring strategies have an influential contribution during reading because they allow readers to evaluate and regulate their comprehension.

2.6 The Processes Involved in Comprehension

Comprehension is a complex process that entails other cognitive sub-processes which work simultaneously and imply interaction between readers and what they bring to the text in addition to text variables. Microprocesses (understanding sentences), integrative processes (connecting segments of the text), macroprocesses (understanding narrative and expository text structures), elaborative processes (working beyond the text to make meaningful connections) and metacognitive processes (monitoring comprehension and retaining information for future use) are processes provided by Irwin (1991). These processes are involved in comprehension, they are complementary and they serve

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comprehension. Moreover, a deficiency in one of them may affect comprehension (Schumm, 2006, p.226-227).

2.6.1 Microprocesses

These types of processes involve selecting chunks of individuals. For instance, words, phrases or clusters within the sentence, then interpret them, after that obtain the meaning and achieve understanding as Klinger, Vaughn and Boardman (2007) state that: "micro-processing refers to the reader's initial chunking of idea units within individual sentences. "Chunking" involves grouping words into phrases or clusters of words that carry meaning, and requires an understanding of syntax as well as vocabulary" (p.9). Thus, good readers do not interpret each word of the sentence in isolation. However, they join words in order to obtain the overall understanding.

2.6.2 Integrative Processes

These processes imply connecting sentences within the same text, as comprehending a text involve more than the comprehension of the ideas of individual sentence. In such way, readers can fulfil comprehension by making inferences and connecting the ideas of those sentences that construct the text. Therefore, comprehension does not only involve the understanding of chunks or units within the sentence, but also the connection of ideas that every sentence carries as the reader progresses through individual sentences, he or she is processing more than the individual meaning units within sentences (Klinger, Vaughn & Boardman, 2007, p.10).

2.6.3 Macroprocesses

These processes imply the reader being able to select, summarize and organize ideas to obtain a whole understanding of the text. Moreover, the use of these processes

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helps the readers retain the vital ideas that have contribution in the whole comprehension of the text and get rid of the less important ones, as Klinger, Vaughn and Boardman (2007) asserts that:

Ideas are better understood and more easily remembered when the reader is able to organize them in a coherent way. The reader does this by summarizing the key ideas read. He or she may either automatically or deliberately (i.e., subconsciously or consciously) select the most important information to remember and delete relatively less important details (p. 11).

2.6.4 Elaborative Processes

The elaborative processes refer to those that readers apply in order to make inferences. Those inferences may take two forms. First, they may be bridging inferences; in which the readers use ideas mentioned by the writer earlier. Second, readers may use forward inferences or the so called 'predictions' by the use of their prior knowledge and experiences to draw clear comprehension. Furthermore, reading is defined by Wolf (1993) as "a constructive and active process that entails relating new and incoming information to information already stored in memory' (as cited in Wu,2016 , p. 13). Thus, the readers comprehension of the text may or may not correspond with the writer's intended ideas because the readers brings to the text more than what is already there and this by the use of their prior knowledge. For this, Smith (1971) states that "what the brain tells the eye is more than what the eye tells the brain" (as cited in Alderson, 2000, p. 4); this even illustrates the influence of the readers' prior knowledge on what they are actually reading.

2.6.5 Metacognitive Processes

As known, metacognition is thinking about thinking. Moreover, in the case of reading comprehension it refers to the reader's conscious awareness of his cognitive processes; as Klinger, Vaughn and Boardman state that "metacognition is the reader's conscious awareness or control of cognitive processes. The metacognitive processes the reader uses are those involved in monitoring understanding, selecting what to remember, and regulating the strategies used when reading" (2007, p. 11). The below figure illustrates the various processes involved in comprehension:

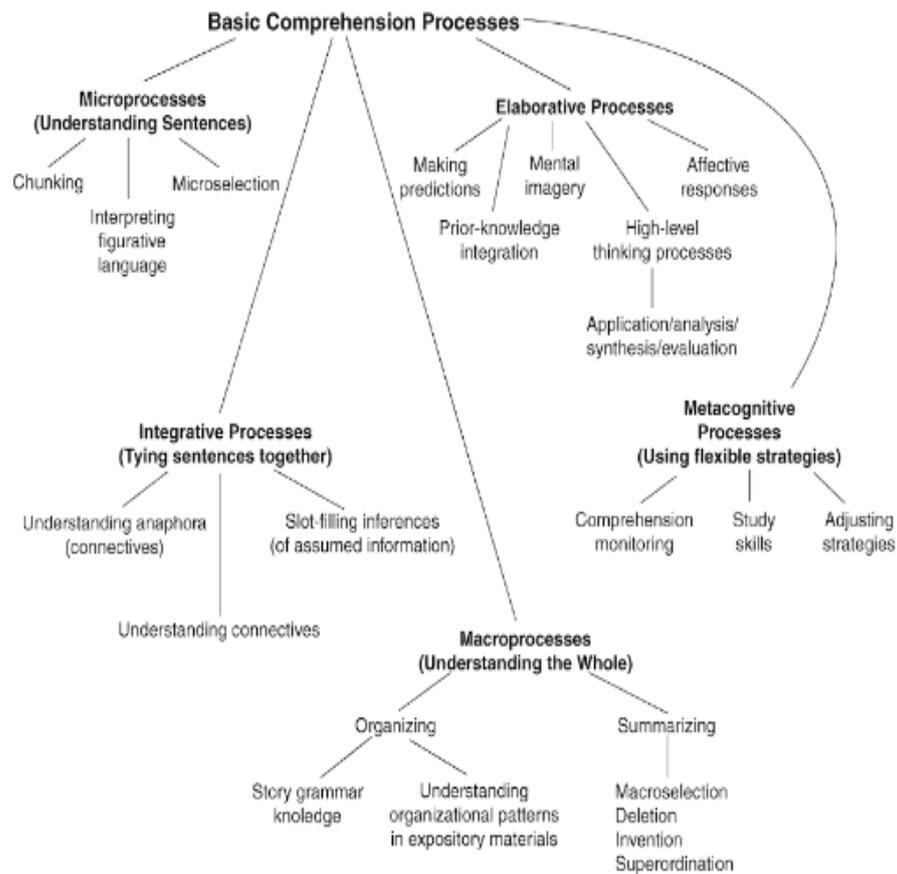


Figure 2.8: Irwin and Baker's Model of Reading Comprehension (Adapted from Schumm, 2006, p. 226).

Thus, metacognitive processes involvements are the readers awareness and control over their cognitive processes that allow them to process what they are reading so that they make sure that what is read is effectively understood, selected and eventually remembered; for this, Irwin (1991) states that "metacognitive processes of comprehension monitoring. This is the act of consciously checking that what is read makes sense" (as cited in Tennent, 2015, p.31).

2.7 Factors Affecting Reading Comprehension

Levels of reading comprehension of the same reading material differ from one reader to another and that is due to a variety of factors. Those factors can be related to the reader himself, as they may be due to the text.

2.7.1 The Reader-Based Factors

Researchers have found that there are various factors that stem from readers themselves which include the reader's background knowledge, text knowledge, metacognitive strategy knowledge and affective characteristics. Those factors contribute to a large extent in the process of constructing meaning out of a given text (Brown et al.,1986, Flavell,1985, Garner,1987, as cited in McCormack & Pasquarelli, 2010, p. 14).

2.7.1.1 The Reader's Background Knowledge

Prior knowledge of the topic and related vocabulary receive a vital importance in the successfulness of the reading comprehension. As Allington and Cunningham (2006) assert that "the most important factor in how much readers will comprehend ... about a given text is their level of knowledge about that topic" (as cited in Schwanenflugel & Knapp, 2016, p.193). In the same sense, Carrasquillo and Rodriguez (2001) emphasize the

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importance of prior knowledge and precisely of the vocabulary related to the topic in achieving comprehension of the text, they state that:

Having sufficient prior knowledge of the topic to be read and the related vocabulary knowledge are essential for successful reading comprehension. The more the reader knows about the author, the vocabulary, and the concepts, the better they are able to construct meaning from the text (p. 96).

Moreover, it is believed that readers who are thoroughly familiar with a subject will be more likely to be sensitive to new ideas about that subject when they encounter them in their reading. For Koda (2010, p.188) 'reading comprehension, as repeatedly noted results from the integrative interaction between derived textual information and pre-existing knowledge'.

2.7.1.2 Text Knowledge

Another crucial factor that readers encounter in their reading is the text knowledge. The latter may affect comprehension to a great extent. Text knowledge as illustrated by Garner (1987) "text knowledge includes what readers already know about text features, linguistic structures, and text structures. It also includes what readers expect when they read different types of text" (as cited in McCormack & Pasquarelli, 2010, p. 114).

Furthermore, Koda (2010) stresses the importance of text structure in understanding content information in the text, he states that: "Content information is differentially organized in a distinct text types. Therefore, in detecting and isolating significant text ideas, text structure knowledge plays a major role in comprehension and retention" (p.188).

2.7.1.3 The Metacognitive Strategy Knowledge

Metacognitive strategies have a significant role in reading comprehension. They construct one of the influential factors which can impact comprehension to a great extent. According to Alfassi (1988), the use of metacognitive strategies implies the use of strategies to plan, monitor, and regulate one's reading comprehension (as cited in Woolley, 2011, p.148). Through the use of those strategies, the reader will fulfil self regulation which is, according to Reed et al., (2002), a crucial metacognitive strategy that ensures readers' engagement in the reading act. In addition, it allows readers obtain the meaning from the reading material (as cited in Wolley, 2011, p.148).

2.7.1.4 Affective Characteristics

Educators stresses that one of the most important factors in reading comprehension is the affective characteristics. These latter encompass the readers' motivation, interest and attitude about the act of reading (McCormack & Pasquarelli, 2010, p. 114). Those affective factors are synthesized by Alexander and Jetton (2000) as following:

Learning from text is inevitably a synthesis of skill, will, and thrill. Few would argue with the premise that readers need to be skilled. Yet, learning from text cannot take place in any deep or meaningful fashion without the learners' commitment (i.e., will). Nor will the pursuit of knowledge continue unless the reader realizes some personal gratification or internal reward from this engagement. (as cited in McCormack & Pasquarelli, 2010, p. 114).

To illustrate more, despite the importance to be skilled reader, it is not sufficient. However, readers should possess the will which is the commitment to the reading event in

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addition to the thrill which refers to the interest in and the reward from reading. All in all, both the will and thrill are vital for the reading comprehension success.

2.7.2 The Text-Based Factors

2.7.2.1 Linguistic Complexity

Linguistic complexity often refers to two features of the text which are syntax and semantics.

2.7.2.1.1 Syntax

Syntax refers to the principles and rules regarding sentence structure in a given language. The complexity of the syntactical structures is one of the major factors that can affect reading comprehension. The more syntax increases the more elaborated sentences result and the more difficult they become to be comprehended. McCormack and Pasquarelli (2010, p. 112) emphasize this and state that "the complexity of the syntax affects the readers' overall comprehension task".

2.7.2.1.2 Semantics

Semantics is another linguistic complexity of texts which has to do with meaning as illustrated by McCormack and Pasquarelli (2010, p.112) that "whereas syntax has to do with form, semantics has to do with meaning. The term semantics refers to the vocabulary in the text and its applied meaning, both denotative and connotative".

Rigorous texts are characterized with highly complex linguistic structures. Thus, it becomes challenging for readers to obtain the intended meaning easily because the meaning of such linguistic structures does not lie on the denotative meaning. However, it resides on the connotative meaning and it can only be inferred from the context.

2.7.2.2 Text Structure

One of the text based factors that affects reading comprehension is text structure. This latter refers to the ways in which whole texts, Chapters, or chunks of connected text are organized. These factors have to do the surface features of the text. They have been summarized in the following figure:

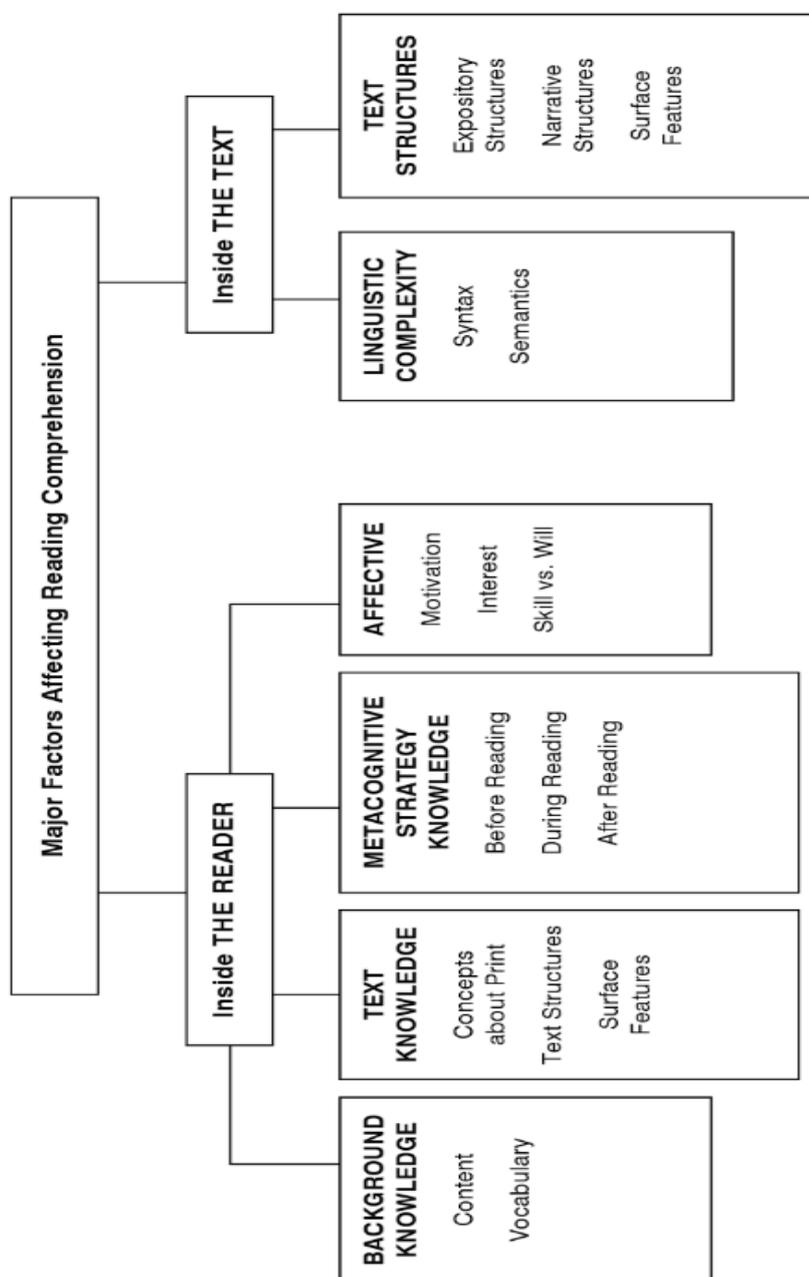


Figure 2.9: Major Factors Affecting Reading Comprehension : A Concept Map-Based on Samuels (1983), Flavell (1985), Garner (1987), Brown, Arbruster and Baker, and Alexander and Jetten (2002). (Adapted from MaCarmack & Pasquarelli, 2010, p. 111)

Conclusion

Through this chapter we have dealt with some generalities about reading skill. Then, we spot the light on reading comprehension and we attempted to cover its most important definitions and its different strategies such as the bridging inferences, visualization, prediction, and finally comprehension monitoring. Moreover, out of this framework, we have concluded that reading comprehension is an intertwined process and that is because it involves numerous processes in order for the reader to achieve comprehension.

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Introduction

The present chapter is devoted to the practical part of this research. It yields detailed analysis of the collected data followed by a thorough discussion of the gathered results in an attempt to check the research hypothesis. In order to enrich this study with adequate data, a questionnaire was designed and distributed to middle school teachers of English language who teach fourth year classes, since this study is concerned with the impact of pupils' poor handwriting on teachers' reading comprehension. Additionally, classroom observation was selected as another data collection tool for this study and that in order to observe pupils closely and diagnose the factors that may affect their handwriting during examination.

3.1 Teachers' Questionnaire

The target aim behind the use of this data collection tool is to obtain the different views and attitudes that middle school teachers of English language have toward their pupils' handwriting.

3.1.1 Description of the Teacher's Questionnaire

This questionnaire is mainly conceptualized on the basis of what was dealt within the theoretical part of the present research. The questionnaire is designed for middle school teachers precisely who teach fourth year classes. This questionnaire is administered to 11 teachers who were chosen randomly from different middle schools. They show their collaboration through their answers, comments, and suggestions. The questions in this questionnaire are either closed questions for which teachers are supposed to give 'yes' or 'no' answers, or to choose the appropriate answer from different options; or the questions are closed-ended questions which are mostly used in this questionnaire; furthermore, the

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close-ended questions used to ask the respondents to choose from predetermined answers ; in addition to this type of questions, we have the follow up questions which take the form of ‘justify your answer’ or ‘justify please’ ; such questions allow us to obtain thorough and much clear responses. Thus, ambiguity is minimized. The teachers’ questionnaire consists of twenty (20) questions divided into four sections ; each one of which is either directly or indirectly related to the research.

3.1.2 Administration and Aim of the Teachers’ Questionnaire

As mentioned earlier, the present study works on middle school teachers who teach English language; precisely those who teach fourth year pupils. This questionnaire was posted on one of the middle school teachers’ groups on Facebook ; in addition, it was distributed hand to hand to some other teachers from different middle schools. Eventually, we have received about twenty (20) questionnaires from which we have selected eleven (11) questionnaires which were most clear and complete and which we thought that they may be valuable data and serve our study. The target aim behind this questionnaire is to use the teachers’ answers to help us obtain the teachers’ attitude toward their pupils’ handwriting and whether it can cause them difficulties in comprehending the pupils’ written productions.

3.1.3 Analysis of the Teachers’ Questionnaire

3.1.3.1 Section One : General Information

Q1- Would you specify your degree?

Teacher's degree	Number	%
License	07	63.64%
Master	03	27.27%
Magister	01	09.09%
Doctorate	00	00.00%

Table 3.1 : Teachers' Educational Qualification

As indicated in the table above that the majority of teachers of a rate of (63.64%) and which represent seven teachers have license degree, and three teachers have their master degree, and only one teacher have magister degree ; however, we have no teacher that holds a doctorate degree.

Q2- How long have you been teaching English in middle school ?

Period	Number	%
1-5 Years	04	36.36%
5-10 Years	03	27.28%
More than 10 Years	04	36.36%

Table 3.2: Teachers' Experience

As the table above illustrates that there is a percentage of (36.36%) of teachers who have a teaching experience of one to five years, and (27.28%) of teachers whose experience is from five to ten years, while only (36.36%) of teachers have an experience of more than ten years ; which means that the majority of teachers are novice and they lack experience in teaching.

Q3- As an English language teacher, which language skills do you focus on more ?

The Skill	Number	%
Reading	01	09.09%
Listening	00	00.00%
Writing	04	36.36%
Speaking	02	18.18%
Listening and speaking	01	09.09%
Writing and Speaking	02	18.18%
All of Them	01	09.10%

Table 3.3 : The skill that Needs more Focus

In this question, teachers were asked to identify which of the language skill (s) that they do put much more focus on. The majority of teachers (36.36%) have indicated that they put more focus on the writing skill rather than the other skills. Thus, this clearly illustrate that teachers are aware of the importance of the writing skill in the educational success of their pupils.

3.1.3.2 Section Two : An Overview about writing Skill :

Q4- How do you consider writing skill?

The importance of writing skill	Number	%
Important	11	100%
Not Important	00	00.00%

Table 3.4 : Teachers' Attitude towards Writing Skill

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The table above illustrates that (100%) of teachers believe that the writing skill is important. Later in this question teachers were asked to justify their answers, and their justifications were varied and valuable ; to mention few, for some teachers the importance of writing resides in that it is the skill through which pupils can express their thoughts and ideas ;in addition, it allows them to integrate their knowledge in a visible way which in turn allows teachers to assess their pupils' understanding of what they have been taught ;however, for other teachers writing is important in the sense that pupils need to possess good writing skills to express their knowledge accurately in exams. In the same vein, other teachers emphasized the importance of writing skill and stated that writing is important because pupils are not examined upon what they speak, listen or read ;in fact they are examined upon what they write . Thus, this emphasizes even more that the writing skill has an enormous impact on the pupils achievement and educational success.

Q5- Do you think that writing is well covered by the current syllabus?

Teachers' Response	Number	%
Yes	05	45.46%
No	06	54.54%

Table 3.5: Writing Skill and the Current syllabus

According to the results illustrated on the table above, the higher rate (54.54%) goes to the teachers who think that the writing skill is not well covered by the current syllabus. According to the teachers' answers, the pupils do not receive what serve their writing skill. Hence, this will end up with them having low level in writing skills.

Q6- The following are considered to be amongst the main aspects of writing. Please do circle the appropriate number according to the extent of importance of each one of them.

(1) important, (2) important, (3) so important.

Aspect	Not Important	Important	So Important
Vocabulary	00.00%	18.18%	81.82%
Grammar	00.00%	63.64%	36.36%
Word Structure	09.10%	72.72%	18.18%
Spelling	00.00%	72.73%	27.27%
Handwriting	27.28%	36.36%	36.36%

Table 3.6 : The Extent of Importance of Each Writing Aspect

The above table revealed that we have two main teachers' views about the importance of having a good handwriting. In one hand, those teachers who have stated that handwriting is important are those who are aware of the importance of having a good handwriting in the educational context. However, in the other hand, we can notice the existence of a considerable percentage of teachers (27.28%) who believe that handwriting is not important. As a result, we can confirm that having poor handwriting is not only the result of pupils' neglect of this skill ; however, it can be due to teachers' unawareness of the importance of developing such kind of skill among their pupils.

Q7- How do you consider your pupil's level in writing skill ?

Level	Number	%
Good	0	00.00%
Medium	07	63.64%
Weak	04	36.36%

Table 3.7 : Teachers' Attitude towards Their Pupils' Level in Writing Skill

The above table shows that all teachers regard their pupils writing skill either as medium (63.64%) or weak (36.36%) ; while no one of the teachers has considered his/her

pupils' writing skill to be good. These results illustrate that teachers are consciously aware that their pupils have deficiencies in their writing skills. And they are encountering serious problems in their writing skills, and this may be because writing is not thoroughly covered by the syllabus, as teachers emphasized in (Q5), or it may be due to that teachers lack teaching experience.

Q8- Do your pupils have writing difficulties?

Option	Number	%
Yes	11	100%
No	0	00.00%

Table 3.8 : The Existance of Pupils Writing Difficulties

The table reveals that (100%) of teachers have answered 'yes' which means that their pupils are having writing difficulties. This may stand as a argument for the previous question because when the pupils are encountering writing difficulties this may well lead them having low level of writing skills.

- If yes, how many of them ?

Option	Number	%
All of Them	02	18.18%
Most of Them	09	81.82%
Some of Them	0	00.00%
No one of Them	0	00.00%

Table 3.9 : The Number of Pupils who Have Writing Difficulties

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A percentage of (81.82%) of teachers think that most of their pupils have writing difficulties, and (18.18%) claim that all their pupils have those difficulties. Thus, these results strengthen the view that the low level of writing skills that pupils have is a result of the writing difficulties that they encounter.

3.1.3.3 Section Three : Assessing Writing / Introduction to Handwriting :

Q9- have you corrected fourth year middle school final exam papers before ?

Option	Number	%
Yes	05	45.46%
No	06	54.54%

Table 3.10 : Teachers' Experience of Correcting Fourth Year Middle School Exam Papers

this table illustrates that (45.46%) have had an experience in correcting fourth year middle school exam papers. Whereas (54.54%) did not have any experience in correcting middle school final exams. It can be said that this is due to that most respondents are teachers who have slightly short period of experience in teaching.

- if yes, how many times?

Years of Experience	Number	%
1-5	02	18.18%
5-10	02	18.18%
More Than 10	01	09.10%
Never	06	54.54%

Table 3.11 : Years of Experience in Correcting Fourth Year Middle School Exam Papers

two out of Those five teachers who have corrected in the final exam of middle school corrected from one to five times ; moreover, the same number of teachers corrected the final exam of middle school from five to ten times. While only one teacher who have corrected middle school final exam about twentynine times. This shows the contrast in the experience that teachers of English language, nowadays. Because a large number of teachers are novice teachers.

Q10- According to you, including a situation of integration in the English language exam is.

Option	Number	%
Compulsory	08	72.72%
Preferable	02	18.18%
Optional	01	09.10%

Table 3.12 : Teachers' Attitudes Toward Including a Situation of Integration in Fourth Year English Language Exam.

As the above table reveals, the vast majority of teachers (72.72%) think that the situation of integration in fourth year English language exam is compulsory. While only (18.18%) assumes that it is preferable, and the other (09.10%) think that it is optional. Those who think that the situation of integration is compulsory do so because, as justified by some of the teachers, that the situation of integration is a must in the competency based approach and that because the ultimate aim of this approach is to make learners able to integrate all what they already know and have been taught in order for teachers to ensure that learning took place.

Q11- From the following, what are the main aspects that have greater effect on your pupil's written production in the exam ?

- a) Lack of vocabulary,
- b) Grammatical mistakes,
- c) Sentence structure,
- d) Punctuation,
- e) Handwriting,
- f) All of them

Aspect	Number	%
a	02	18.18%
b	00	00.00%
c	00	00.00%
d	00	00.00%
e	00	00.00%
f	04	36.36%
a+b	02	18.18%
A+b+d	02	18.18%
a+c	01	09.10%

Table 3.13 : The Main Aspects Affecting Pupils Written Production in the Exams

As the above table reveals, seven teachers of a percentage of (63.64%) think that the aspects that greatly affect the pupils' written productions are mainly one or a combination of the aspects that are related to the structure of the language such as grammatical mistakes, sentence structure, punctuation, and lack of vocabulary ; however, the other (36.36%) is the percentage of teachers who think that the aspects that have effects on the pupils' written productions are those related to structure and also the aspect

of handwriting ;therefore, those teachers consider handwriting to be one of the aspects that can impact a pupil’s written productions. Thus, teachers do not consider handwriting as an aspect that can affect pupils’ written productions in the exam, and instead they put much more emphasis on the aspects that are related to the structure of the language.

Q12- When correcting your pupils’ exam sheets, do you take their handwriting into consideration?

Option	Number	%
Yes	07	63.64%
No	04	36.36%

Table 3.14 : Teachers’ Views about Taking Handwriting into Consideration when Correcting their Pupils’ Exam Papers

The results illustrated on the table reveal that (63.64%) of the teachers answers’ were ‘yes’ ; which means that they do take handwriting into consideration when correcting their pupils’ exam papers. While for the others handwriting does not constitute a problem for them in correcting their pupils’ exam paper. The results obtained in this question does not correspond with the previous one because (Q 11) the majority of teachers said that handwriting does not affect the written productions of pupils, whereas in this question the majority of teachers said that they take handwriting into consideration while correcting the exam sheets.

Q13- Do you think that teaching pupils how to develop their handwriting is :

Option	Number	%
Important	10	90.90%
Not Important	01	09.10%

Table 3.15 : Teachers' Attitudes toward the Importance of Teaching Handwriting

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As shown on the table, only (09.10%) said that teaching pupils how to develop their handwriting is not important; however, the majority of teachers (90.90%) affirmed that it is important to teach pupils how to develop their handwriting. The teachers were asked later in this question to provide their justifications ; and the vast majority claimed that handwriting is a means of communication between the pupils and their teachers, and having poor handwriting may well affect the pupils' marks in exams or tests ; moreover, according to the teachers, handwriting is the mirror of the pupils' ideas and knowledge ; hence having a poor handwriting will at the first place give a bad impression about the pupil ; also it may cause reading comprehension to the examiners. Therefore, this strengthens that teachers do take handwriting into consideration during the correction of the pupils' exam papers. As they have mentioned in their justifications that poor handwriting can drive them to prejudge the content and even the knowledge of pupils ; moreover, poor handwriting can have an impact on their reading comprehension.

3.1.3.4 Section Four : Handwriting and Examiners' Reading Comprehension :

Q14-from your experience as a teacher of English language, do you think that there is a relationship between writing and reading?

Option	Number	%
Yes	11	100%
No	00	00.0%

Table 3.16 : The Existence of a Relationship between Writing and Reading

As clearly illustrated on the table, (100%) of teachers believe that a relation between writing and reading exists.

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- If yes, is it a relation in which :
 - a) Reading affects writing
 - b) Writing affects reading
 - c) The is an interchangeable relationship

The Type of Relationship	Number	%
Reading affects writing	07	63.64%
Writing affects reading	00	00.00%
Interchangeable relationship	04	36.36%

Table 3.17 : The type of the relationship between reading and writing

The above table reveals that (63.64%) of teachers think that reading affects writing ; moreover, (36.36%) of them think that the relation that bound reading and writing is an interchangeable relationship ; however, no one thinks that writing can affect reading.

Q15- Do you think that poor handwriting may cause reading comprehension problems for you when correcting your pupils exam sheets or their written productions ?

Option	Number	%
Yes	08	72.72%
No	03	27.28%

Table 3.18 : Teachers' Attitude towards the Impact of Pupils' Poor Handwriting on Examiners' Reading Comprehension

As it can be noticed in the above table, a rate of (72.72%) of teachers think that handwriting cause them reading comprehension issues during correcting their pupils' exam papers or their written productions; while only (27.28%) stated the opposite. Teachers' answers in this question emphasize that handwriting has an effect on teachers' reading comprehension which constitutes a kind of contradiction with question 14, in which

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teachers were asked to identify the kind of relation that bound reading and writing skills, and no one of them chose the kind of relation where writing affects reading ;while in this question most of the teachers believe that handwriting have an effect on their reading comprehension. Therefore, writing has an effect on reading as it was emphasized in a study carried on the cognitive factors that affects reading comprehension and this study has found that the quality of the reading material has an enormous effect on reading comprehension:

The quality of writing can also affect reading comprehension. Text that is poorly organized and difficult to understand can slow reading speed and significantly hinder reading comprehension. Poor-quality writing may slow decoding speed, as well as syntactic recognition and sentence comprehension. Poor-quality reading material can also cause readers to lose motivation while reading, which negatively affects the reader's comprehension of the text. (Ong, 2011)

Q16- What do you think of readable handwriting?

Option	Number	%
Compulsory	06	54.54%
Preferable	04	36.36%
Optional	01	09.10%

Table 3.19 : Teachers' Attitudes towards Readable Handwriting

Six out of eleven teachers of a rate of (54.54%) believe that readable handwriting is compulsory ; while (36.36%) think it is preferable, and the other (09.10%) believe that it is optional ; teachers stated that they cannot correct someting that they cannot read, and

according to them an exam paper with a readable handwriting gives a good impression to the teacher about the pupil ; in addition, readable handwriting allows teachers to comprehend the ideas that pupils want to convey through their written productions.

Q17- Is there any part of the current syllabus that focuses on handwriting ?

Option	Number	%
Yes	01	09%
No	10	91%

Table 3.20 : The existence of any Part that Focuses on Handwriting within the Current Syllabus

Only one teacher have answered ‘yes’ that the current syllabus consists of parts that deal with handwriting ; however, a rate of (91%) of teachers claim that the syllabus does not contain any part that focuses on handwriting. Thus, handwriting is a skill that is completely neglected in the teaching process.

Q18- if you do think that it should be included, please say why

Teachers believe that handwriting should take part in the syllabus and in the teaching process because the majority of pupils are suffering from the problem of having poor handwriting which impact their achievement negatively, so they think that implementing handwriting in the teaching process will improve it.

Q19- When finding some pupils’ poor handwriting, what kind of feedback you give them?

Type of Feedback	Number	%
Oral Feedback	02	18.19%
Written Feedback	04	36.36%
Both	05	45.45%

Table 3.21: The Kind of Teachers’ Feedback towards Pupils Poor Handwriting

Teachers were asked what kind of feedback do they provide to the pupils with poor handwriting. Their answers vary as illustrates in the table above which indicates that (18.19%) of teachers prefer to provide their pupils with oral feedback ; and (36.36%) provide them with written feedback, while the other teachers of a rate of (45.45%) provide their pupils with both oral and written feedback.

Q20- Do you encourage your pupils to develop or ameliorate their handwriting ?

Option	Number	%
Yes	11	100%
No	00	00%

Table 3.22: Encouraging Pupils to Ameliorate their Handwriting

As the above table illustrates, that (100%) of the teachers stated that they do encourage their pupils to ameliorate their handwriting, and the way that most of the teachers mentioned in their explanations is that they merely ask their pupils to rewrite some passages.

3.1.4 Discussion of the Findings :

The analysis of the different questions in this questionnaire provides us with valuable information that have given us the opportunity to answer some of the vital reasearch questions that were intended to be investigated. Regarding teachers' questionnaire, it can be deduced that teachers consider handwriting among the least important aspect of writing; nevertheless, all of them believe that handwriting should be included in the teaching process; in addition to that most of them take handwriting into consideration while correcting the written production of their pupils. This kind of contradiction reveals that teachers are consciously aware of the important role handwriting plays ; however, they do not attempt to make an intervention to develop this crucial skill

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among their learners and this is clearly illustrated in the teachers' answer when they were asked about the writing aspects that have an impact on pupils' written productions in which approximately all teachers leaned toward the aspects which have a relation with language structure rather than handwriting. Thus, this can allow us to deduce that teachers give more emphasis to the structural aspects of writing and neglect the means through which those structural aspects are presented which is handwriting.

The questionnaire revealed that the majority of teachers consider readable handwriting to be vital. And according to their justifications, they stressed the fact that it is challenging to correct and evaluate a written production which they are not able to read. Thus, readability constitutes an important aspect in handwriting because readable handwriting allows pupils to present their ideas in an organized way which allows ideas to be easily read and understood by the teachers.

Additionally, the vast majority of teachers believe that poor handwriting does impact their reading comprehension. In one hand, teachers assert that when they are encountered with an exam paper written with poor handwriting; this gives them the impression that the pupil is careless and lacks mastery of the subject. In the other hand, exam papers written with good handwriting initially gives teachers a good impression about the pupil's level; in addition to that they will be much more eager to read the content. According to some of the teachers' justifications, the knowledge presented in exam papers can be prejudged based on the quality of the pupil's handwriting ; for instance, teachers usually give high score to exam papers with good handwriting rather than those with poor handwriting eventhough the content presented in both is nearly the same. Therefore, it can be deduced that good handwriting allows teachers to implement reading comprehension strategies effectively such as making inferences to link ideas accurately and eventually achieve the inteded message.

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To sum up, this questionnaire was a useful tool of gathering data from teachers. The results obtained were valuable in answering crucial research questions. Furthermore, the questionnaire gave us the opportunity to know teachers attitudes toward handwriting as well as toward readable handwriting. Additionally, through the analysis of teachers answers it can be concluded that lack of teachers' reading comprehension of pupils' exam papers is the result of the pupils poor handwriting.

3.2 Classroom Observation :

In order to expand our data, we have conducted a classroom observation. The main aim behind choosing this data collection tool is to explore the different factors that affect handwriting during examination which could not be answered through the questionnaire. Therefore, we thought that classroom observation may provide us with the opportunity of being close to pupils during examination and may enable us to closely observe them while they write so that we can diagnose the various factors that may influence their handwriting.

3.2.1 The Procedures of Classroom Observation:

The classroom observation took place on May 15th, 2017 in Hamlaoui Mohamed middle school- Doucen. Due to time constraints, we attended two exam sessions of 3rd tremester. The first was a mathematics exam which started at 08:00 a.m., and took 2 hours. The second exam was an English language exam which started at 10:00 a.m. and took duration of 1 hour and 30 minutes. Moreover, the group being observed consists of 19 pupils. Furthermore; the observation is a structured observation through the use of an already prepared checklist.

3.2.2 Description of the Checklist :

The checklist consists of four main sections: seating position, pen/penhold, Grip and pressure, and Frequency of looking at original during copying task. The first two sections include several items. The former includes five items; namely, distance of eyes from paper, relative height of seat and desk, position of non-writing hand, and position of paper in relation to handedness. While the latter includes three items which are: handedness, position of fingers, and distance from tip.

The checklist is designed in a form of table (see Appendix Two, p.) on which the observer ticks in the columns depending whether the items, which represent different factors that may affect handwriting, are observed or not. Moreover, the observer is able to add any comments in the column specified for the comments. The sections are going to be briefly described in the following.

3.2.2.1 Seating position :

This section was designed in order to observe how accurate pupils' body postures are and what are the different behaviours pupils do while writing that may affect their handwriting. Additionally, this section consists various items, as mentioned earlier, in order to facilitate the observation task.

3.2.2.2 Pen / Penhold :

This section of the checklist is used to check how pupils grasp their pens. The items included in this section are handedness which has to do whether the pupil is right or left handed ; moreover, the fingers position while holding the pen ; in addition to the distance from the tip of the pen which means observing how close or far pupils' fingers are to the tip of the pen.

3.2.2.3 Grip Pressure :

This item was designed in order to observe the amount of pressure that pupils exert on their writing tools.

3.2.2.4 Frequency of looking at original during copying task :

This section aims to check how often pupils look at the original text in order to copy it in their answer sheets. And whether this is among the factors that affect their handwriting.

3.2.3 Analysis of Classroom Observation :

3.2.3.1 Section One : Seating Position

3.2.3.1.1 Position On Chair :

As mentioned earlier, the target aim of this section is to observe the factors related to pupil's posture while writing. Through closely observing pupils behaviour and the overall examination environment, we have obtained data related to the various items under this section which are : the position on the chair, the seat and desk, the distance of eyes from paper, and the paper position.

It was observed that the chair created problems for both short as well as tall pupils. As noticed, for short pupils chairs were too high; as a result, their feet were not completely flat on the floor and in some cases they were dangling; therefore, this will make maintaining postural stability extremely hard when writing, and this will certainly affect the body posture of pupils. For other short pupils, they chose to sit on the edge of the chair so that their feet can reach the floor ; as a consequence, their bottom will not be well back in the chair as illustrated in (Figure 1.4,p.29) ; hence the pupils who adopt this posture will not feel comfortable while writing because much more effort required from the part of the

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pupil when the chair is not in the appropriate height for him/her and that is due to that their feet are not supported, unlike when the chair is in the right height in such case the pupil will be able to achieve the correct writing posture easily. While chairs are too high for short pupil, Tall pupils confront the opposite problem in which chairs are low compared to their long legs. During the observation, tall pupils were observed that they extend their legs and sometimes put one leg over the other so their feet are not flat on the floor which results in consequences that affect the pupils writing position.

3.2.3.1.2 Relative Height of Seat and Desk :

Additionally, the chaire is not the only factor that was observed to have an impact on the pupils' body posture; however, it was also observed that the relative height of seat and desk affect the pupils' posture because the table's height may not correspond with the seat's and vice versa such contrast ends up with pupils to have inappropriate seating positions which will eventually affect their handwriting.

3.2.3.1.3 position of Nonwriting Hand :

Concerning the nonwriting hand, it was observed that some pupils place it on their lap and they bend their back to point that their head becomes extremely close to the answer sheet. In some instances, it was observed that some pupils put their head on the desk and start writing. Placing the nonwriting hand on the lap or putting the head on the desk prevent pupils from having the full picture of their answer sheet while they handwrite ; which in turn will prevent eye-hand cordination from functioning accurately ; therefore, pupils handwriting will be affected because eye-hand coordination is crucial in letter formation, spacing, and the size of writing. In addition, the lack of eye-hand coordination will affect all the aforementioned aspects; thus this will lead pupils to have illegible

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handwriting which in turn will cause reading comprehension problems for their teachers or examiners.

3.2.3.1.4 Position of Paper in Relation to Handedness :

Moving to the position of the paper, most pupils place their paper properly in relation to handedness ;however, there are some other pupils who place their papers straight in front of them so this will result that their elbow push up against their body ; hence the task of handwriting becomes difficult, slower and quite tiring.

3.2.3.2 Section Two : Pen/ Penhold

It was observed that all pupils of the group were right handers ; in addition to that approximately all of them write using the tripod pencil grasp which includes the thumb, the index, and the middle fingers and which is thought to be the optimum pencil grasp ; nevertheless, the majority of pupils have a problem in developing this grip because they hold the pen with the closed web space tripod which means that The pencil is held with the tip of the thumb and index finger and rests against the side of the third finger. The thumb is rotated toward the pencil, closing the web space (Skills Builder, 2015). Moreover, it was noticed that pupils' fingers are either too close to the tip or the top of the pen which may cause pupils serious problems while writing especially in the shape of letters and speed of handwriting.

3.2.3.3 Section Three : Grip Pressure

It was observed that there are some pupils who apply too much pressure on their pens. As a result of the amount of pressure exerted on the pen, we observed that pupils produce either too small or big letters.

3.2.3.4 Section Four : Frequency of Looking at Original During Copying Task :

To copy answers on their answer sheets, Some pupils were constantly looking at the original text. Those pupils were writing each letter in isolation they look to the original text then they copy the letters they retained in their minds on their answer papers ; in such a way the pen lift are increased. Thus, this will affect many aspects of handwriting such as the speed of handwriting, spacing, and the size of letters .

3.2.4 Discussion of the Findings of the Classroom Observation :

Through the analysis of the data obtained from classroom observation, we have gained valuable results about the various factors that affect pupils' handwriting. First of all, furniture has a vital importance in achieving and maintaining good body posture. By furniture, we mean specifically the chair and desk which are extremely important in ensuring pupils' comfort during writing this is asserted by Sassoon (2003, p.30) 'children cannot sit comfortably and use their hands and bodies effectively if chairs and tables are either too high or too low'. And this is exactly what we have observed, and which highly affects pupils' body posture and eventually their handwriting. Thus, to develop a good handwriting, the one should feel comfortable in his seating position ;similarly pupils should be provided with the appropriate furniture because inappropriate furniture will drive them to develop incorrect body postures for handwriting ; hence it becomes very hard to alter it later as stated by Sassoon (2003, p.30) 'they may begin to adapt their bodies accordingly and once an awkward body posture becomes habitual it may not improve even when appropriate furniture is provided'. Thus, it must be taken into consideration that what fits one pupil does not necessarily fit the others.

All pupils were observed that they are right handers and they use the tripod grasp which is regarded to be the efficient grasp; however, we have noticed that the majority of

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pupils use the tripod grasp with closed web space. According to Hallissy (2010) , the latter is a common feature among all inefficient grasps and it necessitates a large movements of the arm and hinders small refined movements of the fingers. Thus, the tripod grasp with closed web space prevent pupils from moving their hands and fingers freely; in addition to this it impedes the flow of their handwriting. During the observation, it was observed that several pupils hold their pens extremely near to the tip to point that they cannot see what they are actually writing so that they bend over; moreover, when we observed closely those pupils' handwriting, we noticed that letter were so small and not evenly spaced; therefore, it can be deduced that the distance of fingers from the pen tip affects handwriting.

Additionally, it was observed that pupils exert either too much or too little pressure on their pens; as a result this impacts their handwriting in various ways; for instance, in terms of letter formation, spacing, and the size of letters. Hence, pressure exerted on the pen represent one of the factors affecting handwriting ; as stated by Moris and Moris (2000, p.100) 'if the grip pressure is too little, the pen can move in unwanted directions and leave a record of those random movements as extraneous makes on the paper' ; furthermore, the enormous amount of pressure that pupils exerted led them to feel pain in their fingers and wrist so that they were reluctant to write more ; this is what Sassoon stresses (2003, p.30) 'some pupils may be so affected that their discomfort turns pain. Hands, arms, or necks can hurt so much that some children may almost stop writing.'

Concerning the position of the nonwriting hand, it was noticed that there are some pupils who were appropriately using their nonwriting hand; while others do not involve it in their writing though it plays a significant role and it is sometimes referred to as the helping hand; Levine believes that the nonwriting hand has a crucial role in handwriting, he stated that (2013, p.102):

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Most of the movements people do are bilateral (using either the arms/ hands or two legs working together). Even the movements that you think are done with just one limb involves the other limb without you ever thinking about it. Consider handwriting. It turns out that the nonwriting hand has an important role in shifting the paper. Handwriting will get much slower and sloppier if the nonwriting hand is not involved.

Thus, this clearly illustrates the importance of involving the nonwriting hand in writing because it facilitate and help the handwriting task for pupils.

Furthermore, the majority of pupils place their papers appropriately in relation to their handedness. While some other pupils place their papers right in front of them this does not allow them to see what they are writing and diminish from their free movements. Therefore, when writing, pupils will bend their backs in order to see their handwriting in such case the paper placement will affect the pupils' body posture and eventually this will affect their handwriting. In an attempt to illustrate the optimum paper placement in relation to handedness Sassoon states that (2003, p.32):

It may be easy enough to explain that most children, in order to sit comfortably to write, and at the same time to see what they are doing, should have their paper over to the side of the hand that they write with. That means that righthanders need their paper over to the right side, and more importantly, left-handers need their paper over to their left side. Children can then slant their paper if they wish. There can be no absolute rule because it is not always the hand that has to be considered.

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Eventually, through the analysis and discussion of data obtained from the observation, a number of factors which affect handwriting were revealed. The findings obtained were of a great help for us to deduce that there are various factors that affect to a great extent the handwriting quality. As it is observed furniture is among the important factors that should be taken into consideration because it plays a large role in the achievement of the correct posture which is in turn the foundation of every movement pupils make while writing. Furniture, posture, pen grasps, grip pressure, and paper position are all factors that affect handwriting.

Conclusion:

Through this chapter, the data obtained were analyzed and discussed. We have used two data gathering tools; namely, teachers' questionnaire and classroom observation. The data gathered from the former are presented in form of tables; moreover, each question is analyzed and at the end a discussion of the finding is provided. Concerning the latter, it is analyzed using the qualitative analysis; each of the items of the checklist is analyzed in isolation; and eventually a discussion of the findings of this tool was done.

General Conclusion :

To conclude, this study is an attempt to shed light on the influence of poor handwriting on reading comprehension. For this, the ultimate aim of the current research is to attempt to answer the research questions and to confirm the research hypothesis which states that if pupils' have poor handwriting, teachers' reading comprehension will be influenced.

This study consists of three chapters, the first two chapters are devoted to the theoretical background of this study, while the last chapter represents the fieldwork. Through the first chapter, we attempted to highlight the most important elements related to the writing skill and handwriting. Initially, we provided a general overview about writing. Later in this chapter, we spot lights on handwriting and highlighted several of its important aspects the second chapter dealt with a general overview of the reading skill. Then, the focus was shifted to reading comprehension for which we attempted to provide the most important elements related to comprehension. The third chapter of this study is devoted to the field work which represents the practical part of our study in which we attempted to analyze and interpret the data collected through the two data collection tools ; namely the teachers' questionnaire and the classroom observation ; in addition to a thorough discussion of the findings.

In order to check the validity of the research hypothesis and to attain our aims, we conducted a descriptive research for which two data collection tools were chosen, namely teachers' questionnaire and classroom observation. The former was administered to (11) eleven middle school teachers of English language precisely those who teach fourth year classes ; moreover, those teachers were chosen randomly from different middle schools in order to investigate their views and attitudes toward their pupils' handwriting and to test

the proposed hypothesis. The observation was held in Hamlaoui Mohamed middle school on a group of (19) nineteen out of (78) seventy-eight pupils of fourth year classes during the third trimester examination to detect the various factors that affect handwriting.

Through the analysis and interpretation of the data collected ; as well as the thorough discussion of the findings, the research questions including the ones that inquire about the teachers attitudes toward poor handwriting, and the various factors affecting handwriting were all answered. Furthermore, the collected findings confirmed the validity of our research hypothesis which states that if pupils' have poor handwriting, teachers' reading comprehension will be negatively influenced.

Time constraints was the major limitation of this study as it was carried out over an extremely short period of time which does not allow the researcher to go in depth within this research. Since this study was confined to a group of pupils in Hamlaoui Mohamed middle school-Doucen and a number of middle school teachers, thus the results obtained out of such sample may not be enough to generalize it to represent all the Algerian middle school pupils. A number of inquiries stemmed from this research which may be interesting to be investigated such as the importance of teaching handwriting and the influence of the affective factors on handwriting.

Recommendations

From the findings obtained out of this study, the following recommendations have been drawn and directed to teachers, pupils and syllabus designers:

For teachers

- Teachers should be aware of the vital role that handwriting plays in education.

- Teachers should attempt to make their pupils aware of the significance of handwriting in their educational success.
- Teachers should provide their pupils with an effective instruction on handwriting so that they can ameliorate this skill because it is a taught skill and an explicit instruction is needed for its development.
- Teachers should be consciously aware of the various factors that affect their pupils' handwriting.
- Teachers' close observation of pupils' during the act of writing is crucial because it allows them to diagnose the actual factor that leads their pupils to produce poor handwriting.
- Individual discussion with pupils is extremely beneficial to make them aware of the problems behind their poor handwriting.

For pupils

- Pupils should practice handwriting more often in order to strengthen their fine motor skills.
- Pupils with maladaptive pencil grasps are advised to use pencil grips.
- Pupils have to be aware of the importance of handwriting in their educational career.

For syllabus designers

- Syllabus designers should give some room for handwriting within the syllabus.

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Appendices

Appendix One

Teacher's Questionnaire

Dear Teachers,

We would be so grateful if you sincerely answer this questionnaire which is an attempt to gathering information needed for the accomplishment of a master's dissertation. Through this work, we want to seek whether there is any relationship that exists between poor handwriting and the teacher's reading comprehension of pupil's exam papers. Your answers are extremely crucial and will be of much help for the completion of this work. Therefore, you are kindly requested to give as precise answers as you can. Tick (√) your answer(s) in the corresponding box(es), and make a full statement whenever necessary. Be sure that the answers you provide will certainly remain confidential and will only be used for research purposes.

"Thank you for your time, your efforts and for your collaboration"

Section One : General Information

Q1. Would you specify your degree?

- a) License
- b) Master
- c) Magister
- d) Doctorate

Q2. How long have you been teaching English in middle school?

- a) 1-5 years
- b) 5-10 years
- c) More than 10 years

Q3. As an English language teacher, which languages skill do you focus on more?

- a) Reading

- b) Listening
- c) Writing
- d) Speaking

Section Two : An Overview about WritingSkill

Q4. How do you consider writing skill?

- a) Important
- b) Not important

In both cases, justify your answer please

.....

.....

Q5. Do you think that writing is well covered by the current syllabus?

- a) Yes
- b) No

Q6. The following are considered to be amongst the main aspects of writing. Please do circle the appropriate number according to the extent of importance of each one of them.

(1) Not important, (2) Important, (3) So important.

• Vocabulary	1 ————— 2 ————— 3
• Grammar.	1 ————— 2 ————— 3
• Word structure	1 ————— 2 ————— 3
• Spelling.	1 ————— 2 ————— 3
• Handwriting.	1 ————— 2 ————— 3

Q7. How do you consider your pupils' level in writing skill?

- a) Good b) Medium c) Weak

Q8. Do your pupils have some writing difficulties?

- a) Yes
b) No

If yes, how many of them?

- a) All of them
b) Most of them
c) Some of them
d) No one of them

Section Three: Assessing Writing/Introduction to Handwriting

Q9. Have you corrected Fourth year middle school final exam papers before ?

- a) Yes
b) No

If yes, for how many times?

.....

Q10. According to you, including a writing item in the English language exam is:

- a) Compulsory
b) Preferable
c) Optional

Please justify

.....
.....

Q11. From the following, what are the main aspects that have great effect on your pupils written production in the exams?

- a) Lack of vocabulary
b) Grammatical mistakes
c) Sentence structure
d) Punctuation
e) Handwriting

- f) All of them

Q12. When correcting your pupils exam sheets, do you take their handwriting in consideration?

- a) Yes
- b) No

Q13. Do you think that teaching pupils how to develop their handwriting is:

- a) Important
- b) Not important

Whatever your answer is, please justify

.....
.....

Section Four: Handwriting and Examiners' Reading Comprehension

Q14. From your experience as a teacher of English language, do you think that there is a relationship between writing and reading ?

- a) Yes
- b) No

If yes, is it a relation in which :

- a) Reading affects writing
- b) Writing affects reading
- c) There is an interchangeable relationship

Q15. Do you think that poor handwriting may cause reading comprehension problems for you when correcting your pupils exam sheets or their written productions?

- a) Yes
- b) No

Q16. What do you think of readable handwriting ?

- a) Compulsory
- b) Preferable
- c) Optional

Please, Explainwhy

.....
.....

Q17. Is there any part of the current syllabus that focuses on handwriting?

a) Yes

b) No

Q18. If you do think that it should be included, please say why

.....
.....

Q19. When finding some students' poor handwriting, what kind of feedback you give them?

a) Oral feedback

b) Written feedback

Q20. Do you encourage your pupils to develop or ameliorate their handwriting?

a) Yes

b) No

If yes, please explain how

.....
.....

We would really appreciate any suggestions or comments from your part. Please feel free

.....
.....
.....
.....

"Thank you for your Time and for your collaboration"

Appendix Two

Classroom Observation Checklist

	Observation	Observed	Not Observed	Comments
Seating Position.	<ul style="list-style-type: none"> • Position on Chair 			
	<ul style="list-style-type: none"> • Distance of eyes from paper 			
	<ul style="list-style-type: none"> • Relative height of seat and desk. 			
	<ul style="list-style-type: none"> • Position of nonwriting hand. 			
	<ul style="list-style-type: none"> • Position of paper in relation to handedness. 			
Pen/ penhold	<ul style="list-style-type: none"> • Handedness 			
	<ul style="list-style-type: none"> • Position of fingers 			
	<ul style="list-style-type: none"> • Distance from tip 			
Grip and pressure				
Frequency of looking at original during copying task				

Appendix Three

Pupil 1

part three:

Dear Baby,
prior to higher education, Algerian students attend pre-primary and secondary school. ~~the~~ Algerians go to the primary school or the nursery school at the age of 6 or 7 years old. At the age of 8 or 9 they go to kindergarten. They turn 10 years old, they go to ~~the~~ ~~secondary~~ school which is called also ~~secondary~~. After finishing primary school in Algeria, they go to ~~secondary~~ school which takes 4 year program 12th, 13th, 14th, 15th. ~~They go to the high school.~~ When Algerian students from senior high

Pupil 2

part two:

Education in Algeria is free of charge but private schools are authorized by the law. It is also compulsory in the constitution. All Algerian schools are mixed. Sex. The academic year starts for southern regions and July for the other parts of the country with two 15 days breaks in December and March. The primary school, the middle school, the college, the university are called the "BEM". They receive their school diploma and they go to university or continue

Pupil 3

DEAR to Bahij

□ In all Bahij schools in mami some Arabic go system works. Algerian pre - university prior to high school. Algerian students should at the age of 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 they start to learn.

One starts at 5 years old. go primary school which is called *alja elementary* or *grade school*. They spend there 6 years.
p: ALEM: *alja elementary*

Adel

Pupil 4

An American Friend of yours has asked students attend pre primary, primary and secondary school. First of all Algeria go to the pre school.

Once they turn 6 years they go to primary school which is called *alja elementary* or *grade school*. They spend there 6 years. After finishing primary school, Algeria

Part Two :-

If I have a bright future ahead, we
If I pass my Brevet exam I'll be the second
class.

then, If I visit and those, I will pass
Brevet, or next exam, then I go to university,
I go university I will study hard and
I will write.

Mohamed

المخلص

يعاني معظم التلاميذ الجزائريين من رداءة خط اليد و يسعون جاهدين للتغلب على هذا المشكل الذي له تأثير كبير بالأخص على مسيرتهم الدراسية. لذلك تهدف هاته الدراسة إلى فحص أثر خط اليد الرديء على مقروئية التلاميذ في إنتاجهم الكتابي. بالتالي، طرحنا فرضية أنه إذا عانى التلاميذ من الخط الغير مفهوم، الأساتذة بدورهم سيتأثرون سلبا في استيعابهم القرائي. من أجل برهنة أطروحتنا تم إجراء دراسة وصفية إلى جانب أخرى نوعية من أجل جمع وتحليل المعطيات. إضافة إلى ذلك، لتجربة أطروحتنا، اخترنا أداتين من أدوات جمع البيانات. تم تصميم استبانة وتسليمها إلى احدى عشر أستاذ تعليم متوسط الذين تم إختيارهم عشوائيا من متوسطات مختلفة و ذلك من أجل استحضار مواقفهم حول خطّ تلاميذهم وأيضا أخذ أجوبة لهذا البحث. ترافقا مع الاستبانة، أجريت عملية ملاحظة صفّ لتلاميذ السنة الرابعة بمتوسطة حملاوي محمد ببلدية الدّوسن في ولاية بسكرة -الجزائر- من أجل التحقق من مختلف العوامل المؤثرة على خطّ التلاميذ أثناء فترة الإمتحانات. بناء على النتائج المتحصل عليها من أداتي جمع البيانات المستعملة، يمكن الاستنتاج أنّ قصور قراءة خط يد التلاميذ عند الأساتذة أساسه رداءة هذا الخط. وعليه هاته المُتَحَصَّلات أكّدت صدق الفرضية السابقة. ومنه ندرك أنّ الخطّ السيء للتلاميذ يؤثر سلبا على القدرة القرائية للأساتذة. في الأخير، تم اعطاء مجموعة اقتراحات والتي كانت منبثقة من النتائج المتحصل عليها.