THE RELATIONSHIP BETWEEN ATTENTION AND ACADEMIC WRITING

العلاقة بين الانتباه والكتابة الأكاديمية

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***ABSTRACT* :**

This study examines the relationship between attention and second language (L2) writing in the Algerian academic setting as mediated by background information from a reading text. The existence of such a relationship should help teachers assess their students' needs and better plan their lessons. The present study inspects a correlational design in order to conclude whether individual differences in attention can predict their L2 academic writing performance. The attention of 32 first year students of English at the University of Oum El Bouaghi has been measured using a test adapted from the Ruff 2 & 7 Test (Ruff & Allen, 1996) and their written performance was measured in terms of fluency, accuracy and syntactic complexity in a summary task. Results revealed a correlational relationship between attention and writing complexity and no linear relationship between attention, fluency and accuracy, contrary to what was predicted. Therefore, attention can be recognised as a predictor of academic writing performance as measured by complexity.

Keywords: *attention; academic writing; fluency; accuracy and syntactic complexity*

ملخص:

هذه الدراسة تقوم بالبحث في العلاقة بين الانتباه والكتابة في المجال الأكاديمي الجزائري بوساطة من المعلومات الأساسية المأخوذة من نص للقراءة حيث يمكن أن يساعد وجود مثل هذه العلاقة المعلمين في تقييم احتياجات طلابهم والتخطيط لدروسهم بشكل أفضل. تعتمد دراستنا على تقصي الارتباط بين المتغيرين لاستنتاج ما إذا كانت الفروق الفردية في الانتباه يمكن أن تتنبأ بأداء الطلبة في الكتابة الأكاديمية. لأجل ذلك تم قياس انتباه 32 من طلاب السنة الأولى في اللغة الإنجليزية في جامعة أم البواقي باستخدام اختبار Ruff 2 & 7 (Ruff & Allen, 1996) وتم قياس أدائهم المكتوب من حيث الطلاقة والدقة والتعقيد النحوي أثناء كتابة ملخص. كشفت التحليلات الإحصائية أن هناك علاقة ارتباطية بين الانتباه وتعقيد الكتابة بينما ليس له علاقة خطية بطلاقة اللغة وصحتها على عكس كل ما تم التنبؤ به لذلك يمكن اعتبار الانتباه مؤشرا لأداء الكتابة الأكاديمية مقاسة بالتعقيد .

الكلمات المفتاحية: انتباه؛ كتابة أكاديمية؛ الطلاقة؛ الدقة ؛التعقيد النحوي.

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INTRODUCTION

Attention is a cognitive process that is necessary to understand all aspects of language. It is involved in the development and variation of interlanguages (ILs) and the development of L2 fluency. It also mediates the role of instruction and individual differences such as motivation, aptitude and learning strategies in L2 learning (Schmidt, 2001). It plays an important role in the processes of text comprehension and production which are typically involved in academic writing (Kintsch & Van Dijk, 1978; Wen, 2014). Consequently, it is believed that having a high attentional capacity results in high L2 performance and proficiency. The importance of attention as a cognitive factor of individual variation in Second language acquisition (SLA) research has ignited our interest in investigating its relationship with academic writing.

Academic writing usually requires the use of background information from reading texts. Whether composing an essay for an exam or writing an academic paper, learners are typically asked to integrate information from different sources into their pieces of writing. This type of writing might be daunting and complex for learners, especially those in their first and second year. However, it is a vital skill for academic success. While little research has been investigating the relationship between cognitive processes and writing (Olive, 2011), less research investigates writing as mediated by reading (Kellogg, 1994).

Based on the assumptions above, the primary research question we addressed concerns whether there is a relationship between attention and L2 writing performance as mediated by reading. This question is based on the hypothesis that L2 writing performance might be constrained by learners' differences in attention. Therefore, a correlational study has been conducted on a sample of 32 first year English students at the University of Oum El Bouaghi.

1. Literature Review

Both reading and writing are related but different. These two language skills involve some of the same cognitive processes like attention (Abu-Rabia, Share & Mansour, 2003). Schmidt (2001) asserts that besides memory, attention is the other component of human cognition that is essential for processing written language. When writing in L2, learners need extra attentional effort in rehearsing sentences in their WM and retrieving the writing mechanics as compared with writing in L1 (Cowan, 2008).

1.1. Attention

Attention is an individual cognitive factor that is frequently used to explain learners' variation in L2 learning and the effects of instructional task demands on their performance (Robinson, Mackey, Gass, & Schmidt, 2012). One of the definitions suggests that attention is "a cognitive process involving the ability to select and focus on particular stimuli from the environment while ignoring others" (Tavakoli, 2012, p. 26). Tavakoli's difinition implies that attention can be seen from four angles (Tomlin & Villa, 1994). Firstly, attention can be conceptualized as capacity. The attentional capacity is limited not only in amount or duration but also in the number of stimuli it can respond to at a single time. Secondly, attention is seen from a selection angle. The attentional system picks the stimulus to register in working memory (i.e., it detects the stimulus). Henceforth, the input becomes intake, which is the linguistic input that is noticed or consciously registered, according to Schmid's (2001) Noticing Hypothesis. Among the large amount of linguistic information that is incoming, learners detect only the features they are ready for and the ones that

task demands put in the spotlight. Thirdly, attention involves focus which is a controlled rather than an automatic process. A task, like writing, that involves the effortful controlled processing of information necessitates a lot of attention. Attentional resources can be distributed on two (or more) independent tasks if one of them requires high attention while the other(s) requires low attention, i.e., can be done automatically. Finally, attention involves the effort of coordinating competing stimuli and ignoring others. Two tasks that require controlled processing can be done simultaneously sometimes, which implies that some regulation, combination and switching happens at the level of attention (Al-Hejin, 2004; Robinson et al, 2012; Tavakoli, 2012).

There exist two types of SLA researchers concerned by attention as capacity and task complexity. The first type perceives attention as limited and is more interested in the effects of its limits then in measuring them. The second type does not see the necessity of such measures since they do not believe in its limit. In our turn, and since we adopt Robinson's (2011) views in this study, we choose to perceive attention as unlimited capacity when drawing on different pools. However, attention as capacity is limited within the same pool of resources (Robinson, 2007).

1.2. Academic Writing

Flower and Hayes (1981) established a model of writing processes which is the planning-writing-reviewing framework in which writing is defined as a "non-linear, exploratory and generative process whereby writers discover and reformulate their ideas as they attempt to approximate meaning" (Zamel, 1983; as cited in Hyland, 2003, p. 11). This writing model emphasizes the cognitive processes that learners engage in rather than their creativity. It approaches writing as a problem solving process in which writers use their intellect to deal with the task complexity.

Writing is decisive for the learners' academic success. According to Murray and Moore (2006), not learning to write is opting for "an academic half-life in which one's legitimate scholarly voice has not been sufficiently exercised or respected" (p. 4). In academia, writing is never writing per se. Academic writing consists mostly in language transforming, for it relies on reading one or multiple texts composed by others and making organizational selective or connective alterations. Before proceeding into generating a text, learners have first to identify whether cultural, linguistic and thematic knowledge is available in memory. It is then automatically activated by the cues provided by the writing task. After that, they have to find meaning in what is new and show understanding. Next, learners have to analyse the text by breaking the concepts into pieces to inspect them and see how they fit together. Finally, they have to interpret what has been read or learned via summarizing, paraphrasing or synthesising it (Irvin, 2010).

Summary writing involves the processes of comprehension, evaluation, condensation, and transformation of ideas. Summarising is described by (Guido & Colwell, 1987) as an invaluable type of integrated writing tasks that is required in academic settings. The ability to summarise in an L2 reflects good understanding, and thus it is closely related to successful learning and communication (Yu, 2008). According to Johnson, summarising is the task of writing "a brief statement that represents the condensation of information accessible to a subject and reflects the gist of the discourse" (1983 p. 473). It involves condensing the substantial information in one's own words and respecting the overall meaning.

Summarising benefits language learners in so many ways, but most importantly, it helps

developing the ability to restructure texts at a morphological, syntactic, and lexical level. It is, however, important to note that low level learners opt for lexical restructuring by using synonyms, for they do not have the tools to understand an L2 text and properly summarise it (Newfields, 2001). Thus, we can claim that high level proficiency reveals itself better at the level of syntactic complexity.

To write is to voluntarily plan, select and edit in accordance to a topic. Unlike reading, writing can be perceived as a highly active skill that expresses thought and necessitates extra attention. Writing is an exhibition of both intention and attention. In other words, attention affects writing in form and meaning. Learners with low attentional levels are slower in depicting cues and responding and need both time and more explicit cues. In fact, research indicates that although, in general terms, composing patterns (sequences of writing behaviours) are similar in L1s and L2s, there are some important differences like editing which is likely to be more recursive in L2-writing, interrupting other writing processes more often and the interference caused by planning which will give rise to processing failure (Norbury, 2011; as cited in Mishra, 2015).

2. Research Questions and Hypotheses

The present study draws on existing research on both attention and academic writing production in L2. It proposes that one of the factors predicting L2 academic writing performance is attention. Its objective is to investigate whether there is a relationship between the two. Therefore, our research aims at answering the two following questions:

1) Is there a relationship between attention and L2 writing as mediated by reading?
2) Do differences in attentional capacity, as measured by the Ruff 2 & 7 Test, predict differences in L2 writing fluency?
3) Do differences in attentional capacity, as measured by the Ruff 2 & 7 Test, predict differences in L2 writing accuracy?
4) Do differences in attentional capacity, as measured by the Ruff 2 & 7 Test, predict differences in L2 writing syntactic complexity?

Based on the literature review and the research questions, we can derive three hypotheses:

Hypothesis 1: There may be a positive correlation between attention, as measured by the Ruff 2 & 7 Test, and fluency in L2 writing production in a summary task, as measured by the number of words per T-unit.

Hypothesis 2: There may be a negative correlation between attention, as measured by the Ruff 2 & 7 Test, and accuracy in L2 writing production in a summary task, as measured by the number of errors in syntax, morphology, and lexical choice per T-unit.

Hypothesis 3: There may be a positive correlation between attention, as measured by the Ruff 2 & 7 Test, and syntactic complexity in L2 writing production in a summary task, as measured by the mean number of clauses per T-unit.

3. Methodology

3.1. Population and Sampling

The population of interest to our research is composed of the first year students at the Department of English at the University of OEB. The first year LMD student body enrolled during the academic year of 2017-2018 consists of 290 students divided into eight groups. A sample of 32

students was chosen from the already formed by the administration groups. Randomly chosen participants from groups 6 and 8 constitute our sample of the accessible subjects (Mackey & Gass, 2005).

3.2. Data Collection and Procedure

A correlational study has been conducted to investigate the association between the non-manipulated variables (Lodico, Spaulding & Voegtle, 2006): attention and academic writing. To compare the two variables and see whether they are related, we started by gathering the data using two instruments, namely: the Ruff 2 & 7 Test (see Appendix A) and a summary task (see Appendix B). After that, we measured the data then analysed them statistically in order to draw conclusions.

3.2.1. The Ruff 2 & 7 Test

To conduct the current study we needed an attention test to correlate with different dimensions of writing performance. Therefore, we adapted the Ruff 2 & 7 Test. This test was developed to measure two aspects of visual attention, which are sustained attention and selective attention. The attention test we have used consisted of three lines of capitalised alphabetical letters among which the digits "2" and "7" are embedded 10 times within each line. Each line contained 50 characters of which 10 were targets and 40 were distractors. The distractors were letters in the parallel search task and digits in the serial search task. The location of targets was randomized throughout the lines. Each task of the two consisted of a series of 10 trials, and each trial consisted of the same block of distractors and targets, but distributed in a different manner. We used two blocks from the "Ruff 2 & 7 Selective Attention Test: Professional Manual" then randomised the characters ourselves in the subsequent blocks.

Participants were given two sheets of paper each: a parallel search sheet and a serial search sheet. The first sheet contained the 10 blocks of the task where distractors are letters, and the second contained the other 10 blocks where distractors are digits. On the top of each sheet, there was a sample of the block of characters provided for respondents to practise the two visual search tasks in which they were asked to detect the targets. They were given 15 seconds for each trial to cross out as many 2s and 7s as possible starting from the top left side of the first line and to continue to the second and third lines in the same way. When time was up, we instructed them to move to the next block by saying next. The test as a whole took five minutes, and the score was computed using the total number of 2s and 7s correctly crossed out (Ruff, Evans, & Light, 1986; as cited in Bate, Mathias & Crawford, 2001).

3.2.2. The Writing Task

Students were asked to write a summary of one text in a reading-to-write task. The text used to follow through the experiment was adapted from the Cambridge IELTS practice book for students (2011). The International English Language Testing System or the IELTS is an international proficiency test developed for non-native speakers, and it has been used since 1989. It is based on authentic texts and real life scenarios (Hosseini, Taghizadeh, Abedin & Naseri 2013).

The readability which is the relative ease of this text was tested using an online readability analyser software ("Readability Analyzer", 2018) and was estimated by the Flesch reading measure formula to be 57.49 points, which is considered plain English. This tool determines the reading ease of the text by counting the number of syllables and sentence lengths (Pearson, Barr & Kamil, 1996). According to the Flesch-Kincaid measuring tool, the text can be read by the average student in the

7th grade level ("Readability Analyzer", 2018).

In the pre-task stage, students were introduced to the framework of the writing task through engaging them in revising the steps of writing a summary. In the during-task, participants received the reading text, of which the topic was about the risks of cigarette smoking, which is a common topic to tackle. This stage was followed by the learners' summaries. In the post-task stage, participants read their pieces and received feedback from their peers and from the teacher.

3.2.3. Measures

In order to assess the fluency, accuracy and complexity of the learners' summaries, we used three measures. The first measure was the number of words per T-unit, where T-unit is the minimal terminable unit that contains an independent clause and its dependent clauses. This measuring tool is used for writing fluency. The second measure, or the accuracy measure, was the ratio of errors to the total number of words. All errors which were syntactic, morphological, and lexical were carefully examined. We disregarded errors that are of spelling and punctuation. The third measure assessing syntactic complexity is the mean number of clauses per T-unit (Housen & Kuiken, 2009). Lu's (2010) computational system for automatic analysis of L2 writing (L2SCA) was used to measure syntactic complexity ("Web-based L2 Syntactic Complexity Analyzer", 2018).

4. Results

In order to find the relationship between attention and learners' writing fluency, accuracy and complexity in summaries, we used the Pearson correlation formula to calculate the correlation coefficient, which is a quantitative measure that relates to non-manipulated variables (Lodico et al., 2006). Our aim was to see whether attention as measured by the Ruff 2 & 7 Test, can be a predictor for learners' L2 writing production as measured by fluency, accuracy and syntactic complexity. We also calculated the coefficient of determination (R^2) to find the percentage at which the variance in academic writing can be explained by attention.

Table.1 below summarises the descriptive statistics for the instruments used, that is, attention and the measures of academic writing. The performances of the participants' means and standard deviations along with the relationship between writing and attention are displayed as follows:

Table 1: **Descriptive Statistics, Pearson Coefficient and the Coefficient of Determination for Attention and Writing Fluency, Accuracy and Complexity**

	Mean	**Std deviation**	**R: Pearson coefficient**	**$R^{2:}$ Coefficient of determination**
Attention	19.938			
Fluency	11.81	3.311	0.4176	0.1744
Accuracy	10.161	5.407	-0.1922	0.0369
Complexity	1.705	0.47	0.6777	0.4593

For the first measure of writing, the correlation coefficient was found to be closer to 0 than it is to 1, (R(32)= +0. 4176); therefore, the correlation between attention and writing fluency is moderate although positive which means that despite the fact that the two variables move together in the same direction, they are loosely related (as Figure.1 shows). The value of R^2, the coefficient of

determination on the other hand, is 0.0049. This means that only 17.44% of the variance in academic writing fluency can be explained by attention as measured by a writing span test.

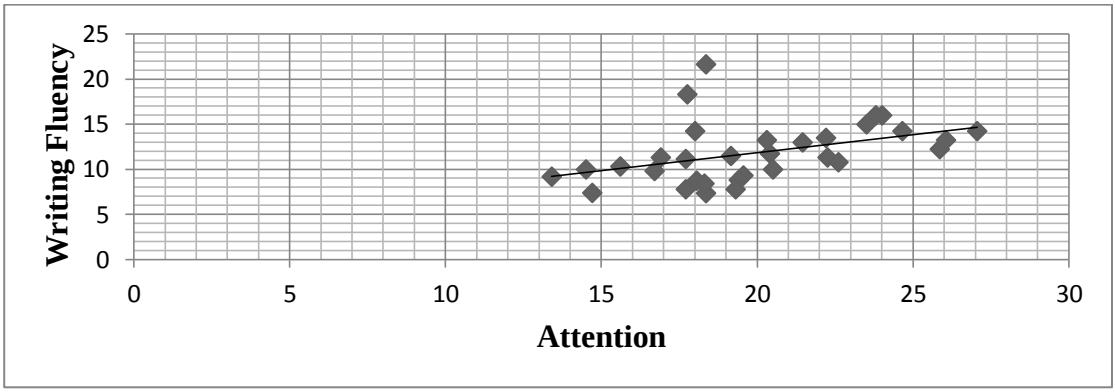

Figure 1. **A scatter plot for the relationship between attention and writing fluency.**

The value of the correlation coefficient (R) between attention and writing accuracy is -0.1922. The value is negative and closer to 0 than it is to 1. Consequently, the scores of the two variables move in opposite directions (Figure.2), and the relationship between them is weak and not linear. The value of R^2 is 0.0369, which means that 3.69% of learners' errors can be determined by their level of attention.

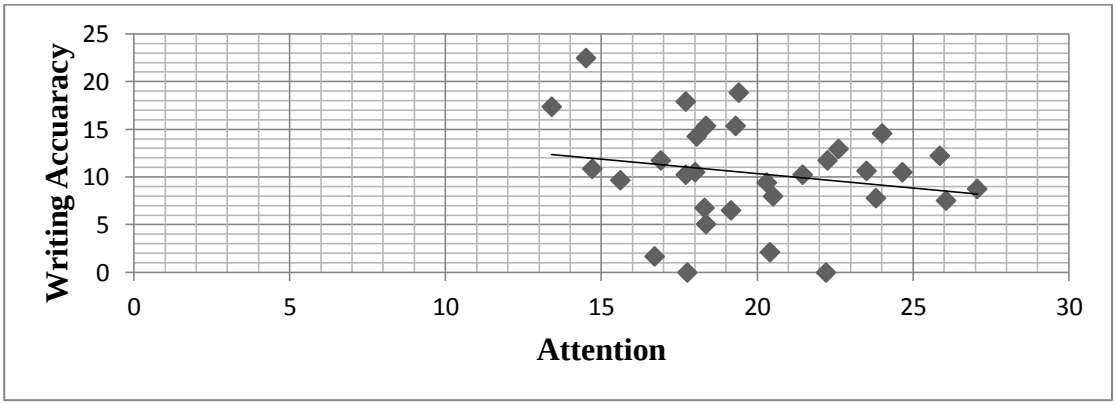

Figure 2. **A scatter plot for the relationship between attention and writing accuracy.**

For the third measure, the value of R (32) is 0.6777 which is a moderate positive correlation. This means that there is a tendency for high complexity scores to go with high attention scores, and a linear relationship exists between the two variables (Figure.3). The value of the coefficient of determination (R^2) is 0.4593. As a result the percentage of 45.93% of the variance in the syntactic complexity of academic writing is determined by learners' attention.

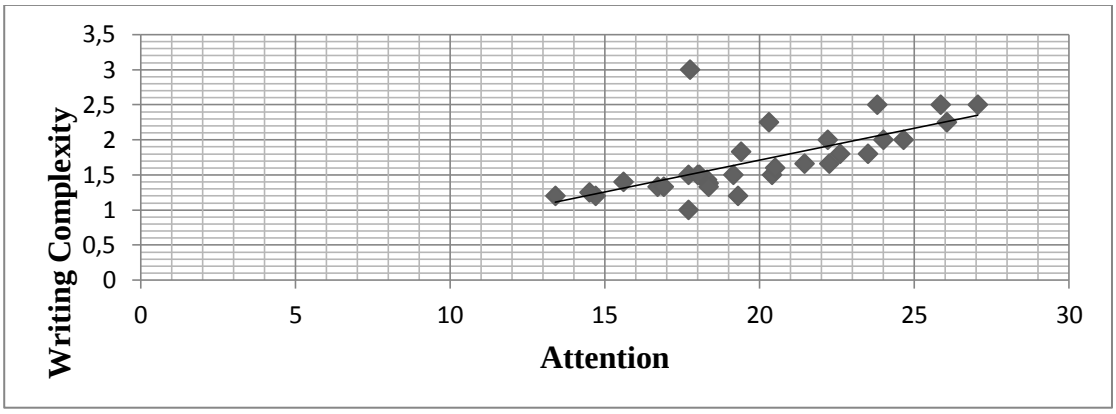

Figure 3. **A scatter plot for the relationship between attention and writing complexity.**

5. Discussion

This study investigates the potential role of attention in determining students' level of performance in academic writing. Our correlational findings show that there is a rather significant linear relationship between attention as measured by the Ruff 2 & 7 Test and writing syntactic complexity while the relationship is less significant for fluency and weak for accuracy.

As an answer to our first research question, the data indicate that attention and L2 writing correlate. However, this correlation does not apply to all the dimensions of L2 academic writing. As demonstrated by the data gathered and the measures taken to answer the remaining questions of this research, only syntactic complexity demonstrates a strong linear relationship with learners' attentioinal levels. Therefore, we can claim that the differences in attention, as measured by the Ruff 2 & 7 Test, have a predictive power over learners' L2 writing production as measured by syntactic complexity while it does not has this power when it comes to fluency and accuracy.

Concerning the complexity, accuracy and fluency measures of L2 writing, the results indicate that learners with high attention are more likely to produce more syntactically complex texts that are not necessarily more fluent or accurate. This variation can be explained through Skehan's (1998) trade-off effect. According to this effect, complexity, accuracy and fluency compete for cognitive resources which are limited. These cognitive resources include attention. This basically means that when confronted to a complex task, like writing a summary for example, learners have to choose whether to use their limited attention to process complexity, accuracy or fluency which results in trading one for another. Having a high attentional capacity does not mean improving in the three CAF measures, for as argued by Ellis (2009), learners can produce more accurate language by avoiding challenging structures that can cause complexity. According to Kim, Nam and Lee (2016), L2 writing complexity shows the strongest relationship to L2 development while accuracy shows sharp, irregular ups and downs (Larsen-Freeman, 2006).

Some limitations of the current study might be related to our data collection and measuring instruments. Though the Ruff 2 & 7 Test has proved its reliability throughout research, administering it in a classroom has been an alternative choice for doing so in a language laboratory where conditions, especially timing, could have been more controlled. Hence, results could have been more precise. Future research may choose to test learners' attention using other tests and choosing other environments for these tests. Other alterations might be done at the level writing measures. A holistic measure of writing might be used in order to further depict learners'

comprehension, for as argued before in reading-to-write, comprehension is primordial for a high performance.

CONCLUSION

SLA research has long been trying to answer the question of why students vary in their language learning success, and it has resolved that individual differences are the first responsible for such variation. Learning happens as a result of the optimal interaction between learners' variables and learning environment. This study has demonstrated the association between one of the learners' cognitive differences, namely, attention and their performance in a reading-to-write task. The most important finding of this paper is the recognition of attention as a predictor for good writing. Learners with a high level of attentional capacity can produce more syntactically complex summaries. Considering this, differences in attention among learners need to be taken into account while making decisions about instruction design. As a result, teachers may use the results of this study to gain a better view about their learners' profiles, and thus design better lessons and writing tasks in order to enhance their writing ability. By profiling the learners' cognitive strengths and weaknesses in language learning, it should be possible to match these profiles to tasks and thus improve their chances of success in learning an L2.

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Appendix A: TEST RUFF 2 & 7:
Task 1: Parallel Search (ADAPTED)

Name: …….. Group: …….

Instructions:

- You have **15 seconds** to detect and cross the **2s and 7s** in each block.
- Start from the top left side of the first line and continue to the second and third lines in the same way.
- When time is up, and you hear the word '**next'** move to the next block.

Sample for practice:

2 G O X C 7 M J 7 H Z R N G A S 2 Y W Q 2 L H B Z G J N V 7 E T 2 P R V M J H S T Q 2 C 7 K L W C 7
X M T 7 K T R 2 A V P I W O C 2 G J 7 L S 2 B N V W 7 T O X R 2 P H 7 F D A B M 2 W G K A S T 2 O P
H W E D 2 T R N E Q X 2 P K L 7 P K 7 Z C V 7 2 Z 7 E T G H L K S D L N 7 S 2 W L S N 7 T B M O P W

Blocks:

I W O 2 G O X C 7 M R Q 2 L H B 7 H N G J W Z 7 Z 7 K L G A S J N V 7 E M J 2 Y H T 2 P R V S T Q 2
C X 2 A W C V 7 L S W M T 7 K T R P C 2 G J 7 T I X R 2 P 7 F D T 2 O M 2 W G P 2 B N V H A B K A
S E D 2 H W T R Z 7 E Q X 2 P K L 7 P K 7 Z C V 7 T G H L 2 W L S K N E 2 S D L N 7 S N O P W7 T B M

C 7 V P I W M J 7 N 2 H Z R G O X G V M W A S 2 Y W Q 2 L H B V 7 E T Q 2 T 2 P R C 7 J H S C 7 K L
X M T 7 K A Z G S 2 B J N 7 E T O C 2 G J 7 L N R 2 P H 7 V W 7 T O X F D A B M 2 W G K A S T 2 O P
H D 2 2 Z T R C V 7 N 7 Z T R 2 E Q X 2 P K L 7 P K G H L K W E S D L N 7 S 2 W L S N 7 T B M O P W

X C 7 M J 7 H Z O C 2 R N G A S 2 Q 2 L H B Z 2 P R V T O X 2 G O L K M J H S T Q 2 C 7 K L W C 7 X
M T R 2 A V P I W G J 7 L S 2 B G J N V 7 E T N V W 7 R 2 P H 7 F D A B M 2 W G K A S V 7 2 P H W E
D 2 N 7 S T R N T 7 K E Q X 2 P K L 7 P K 7 Z Y W C Z 7 E T T 2 O G H S D L 2 W L S N 7 T B M O P W

7 M J 7 H Z R L K S D L N G A S 2 Y W Q 2 L H B Z G J N V 7 E T 2 P R V 7 T O X M J H S T Q 2 C 7 K
L W C 7 X M T 7 K T R 2 A V P I W O C 2 G J 7 L S 2 B N V W R 2 P H 7 F D A B M 2 W G K A 2 S T 2 O
P H W E D 2 2 G O X C T R N E Q X P K L 7 P K 7 Z C V 7 B M O 2 Z 7 E T G H N 7 S 2 W L S N 7 T P W

2 G O X C 7 M J 7 H Z R N G A S 2 Y 2 Z 7 E T G H L W Q 2 L H B Z G J N 7 S 2 W L S N 7 T B M O P W
V V M J H S T Q 2 W C 7 X M T 7 K T R 2 A V P C 7 K L I W O C 2 G J 7 L S 2 B N V W 7 T O X R 2 P H
7 F D A B M 2 W G K A S T 2 O P H W E D 2 T R N E Q X 2 P K L 7 P K 7 Z C V 7 K S 7 E T 2 P R D L N

P H W E 2 G O X C 7 M J 7 H 2 P K L 7 P K 7 Z C V 7 2 Z 7 E T Z R M O P W N G A S 2 Y W Q P R V M J
H S T Q 2 C 7 K L W C 7 X M T 7 K T R 2 A V P I W O C 2 G J 7 L S 2 B N V W 7 T O X R 2 P A B W G K
A S T 2 O D 2 T R N H 7 F D E Q X 2 L H B Z G J N V 7 E T 2 G H L K M 2 S D L N 7 S 2 W L S N 7 T B

2 G O X C 7 M J 7 H Z R N G A S 2 Y W Q 2 L H B Z G J N V 7 E T 2 P R V M J H S T Q 2 C 7 K L W C 7
X M T 7 K T R 2 A V P I W O C 2 G J 7 L S 2 B N V W 7 T O X R 2 P H 7 F D A B M 2 W G K A S T 2 O P
H W E D 2 T R N E Q X 2 P K L 7 P K 7 Z C V 7 2 Z 7 E T G H L K S D L N 7 S 2 W L S N 7 T B M O P W

C 7 M J 7 H L H B Z G J N V 7 E T 2 P R V M 2 G O X O C 2 J H S T Q 2 C 7 K L W C 7 X M T 7 K T R V P
Z R N G A S 2 T 2 Y W Q 2 D W G J 7 L S 2 B N 7 E T G H 2 Z L 2 A K O V W 7 T O X G K A S T 2 O P H W
E I R N E Q X 2 P K L 7 P K 7 Z C V 7 D L N 7 S 2 W L S N 7 T B S M P W R 2 P H 7 F D A B M 2 W

X C 7 M J 7 H Z R N G A S 2 Y W Q 2 L H B X R 2 Z G O N V 7 E T 2 P R V M J H S T Q 2 C 7 K L W C 7
X M T 7 K T R 2 A V P I W O C L S 2 B N V W 7 T 7 Z J P H 7 F D V 7 2 A B M 2 W G K O P S N 7 W A S
T 2 O P H W E D 2 T R 2 G O N E Q X 2 P K L 7 P K C Z 7 E T G H 2 G J 7 L K S D L N 7 S 2 W L T B M

2 B N V W 7 T X R 2 P H 7 F Y D A 2 G S B M 2 W G K A S T 2 O P H W E D 2 T R O C 2 N E Q X 2 P K O
X C 7 M J 7 H Z O R N G A S 2 W Q 2 L H B Z G J N V 7 E T 2 P R C V 7 2 Z 7 V M W L S N 7 T B M O P
W J H S T Q 2 C 7 K L W C 7 X M T 7 K T R 2 A V P I W G J 7 L L 7 P K 7 Z E T G H L K S D L N 7 S 2

Task 2; Serial Search (ADAPTED)

Name: …….. Group: …….

Instructions:

- You have **15 seconds** to detect and cross the **2s and 7s** in each block.
- Start from the top left side of the first line and continue to the second and third lines in the same way.
- When time is up, and you hear the word '**next'** move to the next block.

Sample for practice:

3 1 0 7 8 9 4 4 7 0 5 3 7 6 3 8 1 5 2 3 6 5 6 9 7 0 8 9 1 5 7 8 4 3 6 2 8 6 3 2 8 6 7 5 4 2 8 0 9 1
2 9 1 8 9 2 8 1 3 7 6 4 5 3 7 8 0 4 6 7 9 6 2 9 1 2 8 3 9 1 8 3 7 8 9 4 6 5 9 1 4 7 0 8 6 7 1 3 0 3
9 1 0 2 3 3 8 9 4 1 2 6 5 5 3 5 7 6 8 9 5 7 0 5 9 6 1 7 3 2 8 5 9 2 8 3 1 2 8 3 3 7 4 3 8 9 4 6 2 5

Blocks:

8 9 5 7 0 5 9 6 9 1 0 2 3 3 8 9 4 1 2 6 5 5 3 5 7 6 1 7 3 2 8 5 9 2 8 3 1 2 8 3 3 7 4 3 8 9 4 6 2 5
2 9 1 8 9 2 8 1 3 7 6 4 5 3 7 8 0 6 5 9 1 4 7 0 8 6 7 1 3 0 3 4 6 7 9 6 2 9 1 2 8 3 9 1 8 3 7 8 9 4
2 3 6 5 6 9 7 0 8 9 1 5 7 8 4 3 6 2 8 6 3 2 8 6 7 5 4 2 8 0 9 1 3 1 0 7 8 9 4 4 7 0 5 3 7 6 3 8 1 5

7 8 9 4 4 7 0 5 3 7 6 3 8 1 5 2 3 6 5 6 9 8 6 7 5 4 2 8 0 9 1 2 9 1 2 8 3 9 1 8 7 3 7 8 9 4 6 5 9 1
5 3 5 7 6 8 9 5 7 0 1 5 7 8 4 3 6 2 8 6 3 2 0 4 6 7 9 6 2 3 1 0 9 1 8 9 2 8 1 3 7 6 4 5 3 7 0 8 0 3
9 1 0 2 3 3 5 9 6 1 7 3 2 8 5 9 2 8 3 1 2 8 3 3 7 4 3 8 9 4 6 2 5 7 8 7 0 8 9 8 9 4 1 2 6 5 6 1 3 4

3 2 8 5 1 9 8 3 1 2 8 3 3 7 4 3 8 9 4 6 2 5 3 1 0 7 8 9 4 4 7 0 5 3 7 6 3 8 1 6 3 2 8 6 7 5 4 2 9 1
2 9 1 8 9 2 8 1 3 7 6 4 5 3 7 8 0 4 6 7 9 6 2 9 1 2 8 3 9 1 8 3 7 8 9 4 6 5 9 1 4 7 0 8 6 7 1 3 0 3
7 9 0 2 3 3 8 9 4 1 2 6 5 5 3 5 7 6 8 9 5 7 0 5 9 6 2 1 5 2 3 6 5 6 9 7 0 8 9 1 5 7 8 4 3 6 2 8 8 0

7 8 4 3 6 2 8 6 3 3 7 1 0 7 8 9 4 4 0 5 3 7 6 3 7 6 8 9 5 7 0 5 7 6 8 1 5 2 3 6 5 6 9 7 0 8 9 1 5 5
9 1 8 9 2 8 1 3 7 6 9 1 9 4 2 5 3 7 8 0 3 9 1 8 3 7 8 9 4 6 5 9 1 4 7 0 8 6 7 1 0 3 7 4 3 8 2 4 6 2
8 6 5 4 2 8 9 0 1 0 2 3 3 8 9 4 1 2 6 4 6 7 9 6 2 2 9 1 2 8 5 5 3 5 1 7 3 2 8 5 9 2 8 3 1 3 8 3 3 9

9 1 0 2 3 3 8 9 4 1 2 6 5 5 3 5 7 6 8 9 5 7 0 5 9 0 8 6 1 3 6 2 8 6 3 2 8 6 7 5 4 2 8 0 9 7 1 3 0 7

2 9 1 8 9 2 8 1 3 7 6 4 5 3 7 8 0 4 6 7 9 6 2 9 1 2 8 1 5 8 4 9 1 8 3 7 8 9 4 6 2 5 9 1 4 7 0 8 6 3
7 3 2 8 5 9 2 8 3 1 2 8 3 3 7 4 3 8 3 9 9 4 6 2 5 3 1 0 7 8 9 4 4 7 0 5 3 7 6 3 8 1 5 3 6 5 6 9 7 1

3 1 0 7 8 9 4 4 7 0 6 4 5 3 7 8 0 4 6 7 9 6 1 2 9 2 8 3 9 1 5 3 7 6 8 3 7 7 8 9 4 6 5 9 1 4 7 0 8 6
2 1 3 3 0 3 9 1 3 3 8 9 4 1 2 6 5 5 3 5 7 6 8 9 5 7 0 7 5 9 6 1 7 3 2 8 5 9 2 8 3 1 2 8 3 3 7 4 3 8
9 4 6 2 5 8 1 5 2 3 6 5 0 6 9 7 0 8 9 7 1 5 8 4 3 6 2 8 6 3 2 8 6 5 4 2 8 0 9 1 2 9 1 8 9 2 8 1 3 7

1 2 6 5 5 3 5 7 6 8 9 5 7 6 9 7 0 8 9 1 5 7 8 4 3 6 2 8 6 3 2 8 6 7 5 4 2 8 0 9 1 7 0 8 6 1 3 0 3 4
2 9 1 8 9 2 8 1 3 7 6 4 5 3 7 8 0 4 6 7 9 6 2 9 1 2 9 1 0 2 3 3 8 9 4 8 3 9 1 8 3 7 8 9 7 4 6 5 9 1
0 5 9 6 1 7 3 2 2 8 5 9 8 3 1 2 8 3 3 7 4 3 8 9 4 6 5 3 1 0 7 8 9 4 4 7 0 5 3 7 6 3 8 1 2 5 3 6 5 2

3 1 0 7 8 9 3 7 6 6 4 5 3 7 8 0 4 6 7 9 6 2 9 1 2 8 3 9 1 8 3 7 8 9 4 6 5 9 1 4 7 0 8 6 7 4 3 6 2 8
6 3 8 6 7 5 4 2 8 0 9 5 1 1 3 8 1 5 2 3 6 5 6 9 7 0 8 7 3 2 8 5 9 9 1 5 7 8 2 9 1 8 9 2 8 1 3 7 3 0
9 4 2 8 3 3 7 4 3 2 8 9 4 6 2 5 1 2 6 5 3 5 7 6 8 9 5 7 0 5 4 4 7 0 5 9 6 1 2 8 3 1 9 1 0 2 3 3 8 3

4 7 0 5 3 7 6 3 8 1 5 2 3 6 5 6 9 7 0 8 9 9 1 2 8 3 9 3 1 5 7 8 4 3 6 2 8 6 3 2 8 6 7 5 4 2 8 0 9 1
2 9 1 8 9 2 8 1 3 7 6 4 5 3 7 8 0 4 6 7 9 6 6 7 4 3 8 1 8 9 4 6 2 5 5 9 1 4 7 0 8 6 7 1 3 0 3 2 8 3
2 7 8 9 4 9 1 0 2 3 3 8 9 4 1 2 6 5 3 1 0 7 8 9 4 5 3 5 7 6 8 9 5 7 0 5 9 6 1 7 3 3 2 8 5 9 2 8 3 1

5 3 1 8 2 3 0 3 1 5 2 3 6 5 6 9 7 0 8 7 9 1 5 7 8 9 4 6 7 4 3 6 2 8 6 3 2 8 6 7 5 4 2 8 0 9 1 1 3 0
9 1 8 3 7 8 6 8 9 5 7 0 0 7 6 3 7 8 9 1 8 4 6 7 9 6 2 9 1 2 8 2 8 5 9 2 8 3 8 1 3 5 9 1 4 7 0 8 6 3
9 2 1 0 2 3 3 8 9 4 1 2 6 5 9 2 8 1 3 7 6 4 5 3 5 7 5 9 6 1 7 3 8 3 9 4 4 7 0 5 3 7 4 3 8 9 4 6 2 5

Appendix B: SUMMARISATION TASK

Summarise the following text:

Name: …….. Group: …….

There are simple steps to summarization.

- Read the text first to understand the author's intent.
- Pick out important details that are necessary/ Highlight the important details using keywords.
- Delete extraneous descriptors, details, and examples.
- List keywords in the order they appeared in the passage.
- Trim the list of keywords down to one topic sentence.
- In your own words, write the thesis and main ideas in point form (change only the changeable keywords).
- Reread the original work to ensure that you have accurately represented the main ideas in your summary.

The Risks of Cigarette Smoke

Discovered in the early 1800s and named 'nicotianine', the oily essence now called nicotine is the main active ingredient of tobacco. Nicotine, however, is only a small component of cigarette smoke, which contains more than 4700 chemical compounds, including 43 cancer-causing substances. In recent times, scientific research has been providing evidence that years of cigarette

smoking vastly increases the risk of developing fatal medical conditions. Passive smoking, the breathing in of the side-stream smoke exhaled by a smoker, also causes a serious health risk. Research argues that the type of action needed against passive smoking should be similar to that being taken against illegal drugs and AIDS. They maintain that the simplest and most cost-effective action is to establish smoke-free work places, schools and public places.

Summary:

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