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The negative impact of attention distractors on the progress of the learning process from the perspective of a sample of primary school teachers in Laghouat Province

Benyahia Atallah

University of Amar Telidji-Laghouat (Algeria), Faculty of Social Sciences, Department of Psychology And Education Sciences And Orthophonie, Laboratory of Guidance Psychological Development Tools Measurement In the Middle School
Email: a.benyahia@lagh-univ.dz

Gouni Abdelbasset

University of Amar Telidji-Laghouat (Algeria), Faculty of Social Sciences, Department of Psychology And Education Sciences And Orthophonie, Laboratory of Guidance Psychological Development Tools Measurement In the Middle School
Email: a.gouni@lagh-univ.dz

Abstract---The study aimed to identify the impact of attention distractors on the classroom learning process from the perspective of a sample of primary school teachers in Laghouat Province. The descriptive exploratory method was used to align with the study's objectives. Furthermore, a questionnaire was developed regarding auditory and visual attentional distractors. The study concluded that the negative impact of attention distractors on the classroom learning process was significant, according to the opinions of the study sample.

Keywords---attention distractors, classroom, primary stage.

1. Introduction

The issue of learner distraction is one of the significant classroom problems that should be the subject of numerous and serious studies. These problems occupy the thoughts of teachers, consuming their efforts and time. Providing order and discipline inside and outside the classroom helps them in performing their tasks. Avoiding the expenditure of energy and time on undesirable behavioral patterns is crucial. Environmental conditions, school management, and parents also have a significant impact on increasing or decreasing the degree of attentional distraction.

1-1 Problem Statement

Attention is one of the mental processes that play an essential role in an individual's life in terms of their ability to connect with the surrounding environment and select various competing sensory stimuli. It permits them to accurately analyze, perceive, and respond to stimuli in a way that makes them compatible with their internal or external environment. Attention is important for any learning process and must be available, particularly during school ages. (Dibes & Al Samadony, 1998, p.8). Attention is also an essential requirement for learning and success in classrooms and contributing to improving students' attention levels through planning and preparing preventive programs that reduce attention deficiency. (Al-Selini, 2008, p. 142)

Therefore, preparing appropriate learning conditions is extremely significant. An educational environment free of anything that hinders the learning process with good conditions helps ensure the proper conduct of classroom learning. However, in reality, we notice the presence of many negative stimuli within the educational environment that hinder the proper conduct of the learning process and thus weaken academic performance.

The teacher may seek to create good conditions within their capabilities concerning proper lesson preparation or preparing suitable teaching aids for lesson objectives and other controllable matters. However, they are confronted with conditions outside their scope and control that lead to distracting attention, whether for themselves or students, negatively impacting the proper conduct of the lesson.

The problem of attention distraction has been the subject of many studies. Some examples include (Habbi and Mammadi 2021) study, which sought to determine the prevalence of attention deficit hyperactivity disorder among a sample of primary-stage students from the perspective of their teachers. There is also (Merrell and Tymms 2001) study, which aimed to identify the percentage of children who have attention deficit hyperactivity disorder (ADHD) according to their teachers and examine the relationship between this disorder and academic achievement.

We also find (Saihi and Said's 2006) study, which aimed to determine the scope of the attention deficit hyperactivity disorder problem among primary-stage students. Other studies addressed the school environment, such as (Tamador 2022) study, which endeavoured to identify problems in the school environment and their relationship to student achievement from the perspective of teachers. The study employed a descriptive approach and showed a high percentage of school environment problems and a correlative relationship between these problems and the level of academic achievement.

This sample of studies was an essential foundation for the present study. However, we would like to discuss one of the factors leading to the distraction of attention, which is attention distractors inside and outside the classroom, for which I did not find previous studies based on what I reviewed.

Given the significance of the topic, especially now that classroom issues have widely spread, educational supervisors, teachers, and inspectors highlight the need for psychological and educational studies on these classroom problems to diagnose them and search for therapeutic solutions. Based on the above, this study aims to identify the reality of attention distractors and their negative effect on classroom learning in primary schools in Laghouat Province. Specifically, it seeks to answer the following question:

Do attention distractors negatively affect the classroom learning process?

1-2- Study Objectives

- The study aims to identify attention distractors that have a negative impact on classroom learning from the perspective of a sample of primary school teachers in Laghouat
- The study also aims to determine the degree of negative impact of attention distractors on the smooth progress of learning within the classroom.
- This study also aims to identify the degree of negative impact of attention distractors on students' academic achievement.

1-3- Study Significance

The significance of this study lies in the following:

- Highlighting the problem of attention distraction for stakeholders and educators, as well as teachers and parents, in order to focus on it and find therapeutic solutions. Neglecting this problem hinders the educational process and has detrimental effects on learners, especially in terms of academic achievement.
- Directing researchers to this type of prevalent problem, particularly in the primary education stage, which is one of the most common classroom issues. The study and research aim to diagnose and find therapeutic solutions to help reduce or mitigate these problems.

1-4- Study Delimitations

This study is defined by the following delimitations:

Spatial Delimitations: Some primary schools in the province of Laghouat.

Human Delimitations: This study was limited to a sample of primary school teachers in some schools in Laghouat.

Temporal Delimitations: This study was conducted during the year 2023.

1.5. Previous studies

There have been many studies on the problem of attention deficit, and some of them have been selected in relation to the current study. Here are some of them:

(Rabiner et al. 2000) conducted a study on 620 elementary school students in 8 schools in the United States. Their academic achievement in reading, mathematics, and written language was evaluated at the end of the school year by

their teachers using the Conners Rating Scale for detecting attention problems. The results indicated a 76% lower reading level among students with attention problems compared to those without symptoms. Similarly, students with attention problems showed a 92% lower performance in written language compared to their peers (Al-Bahli & Abu Nayan, 2021, p. 401).

(Merrill and Tymms 2001) conducted a study to determine the prevalence of attention deficit hyperactivity disorder (ADHD) from the perspective of teachers. They determined the relationship between this disorder, academic achievement, and performance in school tests, as well as behavior inside the classroom. The sample consisted of 4,148 third-year students in primary schools, and the results showed a prevalence rate of ADHD ranging from 1.8% to 17%, according to teachers' perspectives. The study also found lower academic grades and positive behavior among students with ADHD compared to normal students inside the classroom (Al-Mutairi, 2005, p. 106).

(Habbi and Mammadi 2021) conducted a study seeking to determine the prevalence of ADHD among primary school students from the perspective of their teachers and to examine gender differences. The study followed a descriptive methodology and included a sample of 55 students from the third and fourth year in the city of Laghouat, selected purposively from a total of 552 students. The DSM-5 criteria were used for diagnosing ADHD, and a teacher rating scale for assessing attention deficit and hyperactivity was used. The results indicated that 60.5% of the students had ADHD among the sample of 552 students. The results also showed a higher prevalence of ADHD among males compared to females. The study recommended early intervention and necessary services to address this problem (Habbi & Mammadi, 2021, p. 40).

(Saihi and Said 2006) conducted a study to determine the extent of attention deficit hyperactivity disorder among primary school students and assess the level of care provided to them according to teachers' estimation in the cities of Biskra, Batna, and Algiers, Algeria. The study found a high prevalence of the disorder in Algerian educational institutions, estimated at 75.82%. The study also revealed a low level of care provided to students with ADHD and the absence of planned programs for this category. Legislative texts showed no concern for this issue (Habbi & Mammadi, 2014, p. 41).

(Haji Doudou and Ismaili 2022) sought to determine the level of attention deficit among second-stage primary school students and examine whether there were statistically significant differences attributable to gender. The sample consisted of 100 students suffering from attention deficit, selected randomly from six primary schools in the province of M'Sila. The study found that the level of attention deficit in the sample led to lower academic achievement, especially in the primary stage (Haji Doudou and Ismaili, 2022, p. 1039).

Comment on previous studies

Previous studies have contributed significantly to shaping the comprehensive view of the current research. The researcher benefited from these studies in defining the study objectives, selecting the sample, determining the appropriate research

tool and statistical methods, and formulating the current research questions. Reviewing previous studies within the researcher's knowledge revealed that few studies have addressed attentional distractors that negatively affect classroom learning from the perspective of teachers in primary education.

1-6- Procedural Definition of study terminology

Attentional distractors: In this study, attentional distractors refer to auditory and visual stimuli that negatively distract the attention of students or teachers inside the classroom. These distractions occur repeatedly during learning sessions, causing interruptions in the learning process for the learner and disruptions in lesson delivery for the teacher, leading to a decrease in academic achievement.

Classroom

In this study, the classroom refers to the formal educational setting where teaching and learning take place.

Primary stage

It is a stage of compulsory basic education that starts from the first year of primary education until the fifth year of primary education.

1.7. Study General concepts

1.7.1. Attention Definition: It is a process that involves selection and choice. Some define it as the selective activity that distinguishes mental life, which is an adaptive sensory process that results in a state of heightened alertness or adaptation in the nervous system of living organisms, making it easier for them to respond to specific stimuli or perform a specific function (Asaad, 1979, p. 48).

(Eriksen and Yeh 1985) define *attention* as the conscious focus of awareness on a single stimulus while ignoring other stimuli that coexist with it (El-Sayed & Faiqa, 1999, p. 17). It is the use of mental energy in a cognitive process or the direction and concentration of awareness in preparation for observing, performing, or thinking about something (Hilmi, 1984, p. 161).

1.7.2. Types of Attention: Scientists classify attention based on several factors, including the location of stimuli, their number, and the nature and source of stimuli. Here is an explanation of these factors:

Concerning the location of stimuli, both (Caver and Fenigstein 1978) observe that attention can be divided based on the location of its stimuli into:

Self-attention: This involves focusing attention on internal stimuli originating from one's own body, such as sensations from organs, muscles, joints, thoughts, and ideas.

Environmental attention: This refers to focusing attention on external stimuli in the environment, apart from one's self. This includes social stimuli and various sensory stimuli, whether auditory, visual, olfactory, or tactile.

In terms of the number of stimuli:

Attention to a single stimulus: This involves selecting and focusing attention on a single stimulus, such as choosing a specific visual stimulus and neglecting other stimuli in the visual field.

Attention to multiple stimuli: This type of attention requires a high level of focus, where an individual directs their attention to more than one stimulus in the visual, auditory, or both domains simultaneously. For example, a driver who is driving while listening to a specific program on the radio. This type of attention necessitates mental effort for the individual to retain awareness of these stimuli (Abu Riyash, 2007, p. 193).

As attention is divided based on the nature of stimuli, it can be categorized into the following:

- **Selective Voluntary Attention:** This type of attention is intentional, where an individual attempts to focus their attention on one stimulus among several stimuli.
- **Involuntary Coercive Attention:** This attention is involuntary and coercive, where the individual's attention is focused on a stimulus that imposes itself forcefully without the effort of choosing between stimuli. An example is attention to a sudden loud noise.
- **Voluntary Automatic Attention:** This attention is directed towards a stimulus that satisfies the individual's needs and personal motives. The individual's attention is easily and effortlessly directed to one stimulus among several stimuli. An example is a child's attention to appealing stimuli that fulfill their needs or achieve their goals (Hassan, 2013, p. 30).

1.7.3. Causes of Attention Distractions: There are several reasons, including

Unsuitable classroom climate, such as numerous problems inside and outside the classroom, inappropriate teaching methods, and the nature of the subject matter. Also, high levels of anxiety and stress among students in the classroom. Lack of attraction and inclination to the scientific material being explained by the teacher (Suleiman, 2010, p. 183).

1.7.4. Selective attention is defined as the process of selecting relevant stimuli from the environment that are related to the present situation or task while inhibiting and neglecting other irrelevant stimuli. This selection allows better and more accurate processing of the situation or task (Abdul Wahid, 2005, p. 21).

According to (Al-Jismani 1994), mental concentration is a sensory focus on an objective thing or an idea related to an objective thing. Concentrating on a specific thing clearly is a mental process that involves the sensory aspect's interest in a particular thing (Al-Jismani, 1994, p. 103).

1.8 Attention Disorder in Children within the Classroom Environment

In the context of the classroom environment, it is undeniable that the classroom climate, including educational materials, teaching methods, educational assignments, and physical aspects such as furniture and specific tools, affects

students' attention. Generally, attention disorders in students can be attributed to two main factors: the first group is related to the students themselves, including genetic, neurological, psychological, and cognitive factors. The second group is related to the classroom environment, including the nature of the educational material, teaching methods, and unsuitable educational tools, as well as the presence of distractions inside or outside the classroom. (Jaber and Brahim, 2005, p. 104)

1.9. School Environment

The school environment refers to all the factors with which an individual interacts, as well as the situations or stimuli to which the individual responds. It includes the influences and variables that individuals interact with, and the environment in which the teaching and learning process takes place affects the student's behavioral performance. In order to understand and connect with the students and fulfill their desired goals, it is necessary to evaluate the nature of the school environment in which students engage in their educational activities. The school environment has a direct effect on students' academic achievement.

The school environment is a focal point of interest for educational institutions because of its important impact on both teachers and learners, as well as the quality of education. Problems within the school environment that students face can limit their abilities and generate boredom. Therefore, attention has been given to this topic, focusing on school buildings and their organization. The school environment is established to achieve specific goals and includes different elements such as buildings, health facilities, recreational facilities, and more. The organizational elements are recognized as the environment in which the educational process takes place in all its aspects by achieving the desired goals of education in preparing an excellent educational generation (Tamador, 2023, p. 402).

2. Method and Tools

2.1. Study Methodology

The researcher employed a descriptive method, which seeks to describe behaviors or dimensions of a phenomenon. The descriptive method involves reporting specific situational characteristics and describing observable factors (Dwidar, Mohamed Abdel Fattah, 1999, p. 83). It is one of the research methods that focuses on studying the reality or phenomenon as it is, describing it accurately, and expressing it quantitatively. The descriptive method aims not only to describe phenomena or reality as they are but also to reach conclusions that contribute to understanding and developing this reality. It includes classifying and expressing information both quantitatively and qualitatively.

2.2. Primary Study Sample

The study sample consisted of 90 male and female teachers teaching at the primary stage. They were randomly selected from primary school teachers in the province of Laghouat. The selected schools were Azouzi Aissa School, Mohamed

Chellali School, Al-Akhawat Bouzekri School, Dely Brahim School, Alali Massaoud School, Zaid Al-Khair Ahmad School, Kaddour Ben Guana School, and Aouissi El-Tayeb School.

2.3. Study Tool

Negative Impact Questionnaire for Attention Distractions on Classroom Learning Achievement.

Scale: Developed by the researcher.

Scale Description: The scale aims to identify the extent of the negative impact of attention distractions on effective learning within the classroom. It consists of 63 items divided into two dimensions. The first dimension is related to auditory attention distractions (33 items), and the second dimension is related to visual attention distractions (30 items). Each statement has three choices: (Does not affect - Moderately affects - Greatly affects). Accordingly, scores of (0-1-2) are obtained, and the overall score on this scale is determined by summing up the scores for these three choices. The total score on the scale ranges from 0 to 189, indicating the level of negative impact of attention distractions on effective classroom learning and vice versa.

Psychometric Properties of the Scale

The scale was standardized by applying it to a sample of 30 male and female teachers randomly selected from primary school teachers in Laghouat province. The selected schools were Halalba Abdelrahmane School, Djridane Lazhari School, and Farhat Belkacem School.

Scale Reliability

The reliability was confirmed using Cronbach's alpha coefficient, which was found to be 0.96.

Scale Validity

The validity was confirmed using the discriminant validity method (bilateral comparison).

Scale Instructions

Provide the following information (gender, level, years of experience, specialization). To apply the research tool, approval was obtained from the Directorate of Education in the province of Laghouat. Subsequently, contact was made with the teachers of the study sample in the schools where they are located. They were asked to respond to the questionnaire from their perspective.

3. Discussion and interpretation of the study results

A detailed presentation of the results obtained through the application of the research tool is provided. This includes an explanation and discussion of the findings in response to the study question.

3.1 - Discussion and Interpretation of the Question Results

To answer the question, which is: "Does attentional distraction negatively impact the learning process inside the classroom?" To address this question, the mean score of the sample was calculated as a whole according to the following method:
 $15570/90 = 173$

Where:

15570: Total scores of the sample individuals on the Attention Distractions scale.

90: Number of individuals in the primary study sample.

173: The overall mean score of the individuals in the study sample on the Attention Distractions scale.

Through the scale correction method, it is found that the overall mean score of the degree of impact of attention distractions on the learning process in the classroom is 173, indicating a significant negative impact on the smooth progress of learning inside the classroom. This leads to a decline in academic achievement.

These results are consistent with a study by (Merrill and Tymms 2001), which aimed to determine the prevalence of children who have Attention Deficit Hyperactivity Disorder (ADHD) from the perspective of their teachers and examine the relationship between this disorder and academic achievement. They are also consistent with a study by (Tamador 2022), which aimed to identify problems in the school environment and their relationship with academic achievement among students from the perspective of teachers. The study utilized a descriptive approach, and the results indicated a significant percentage of problems in the school environment and a correlational relationship between these problems and academic achievement.

Furthermore, these results are in line with a study by (Haj Doudou and Ismaili 2022), which aimed to assess the level of attention deficit among second-stage students in primary school and investigate whether there are statistically significant differences attributed to the gender variable. The sample consisted of 100 male and female students suffering from attention deficit, randomly selected from six primary schools in the M'Sila province. The study found that the level of attention deficit in the sample leads to a decline in academic achievement, especially in the primary stage.

Additionally, they are also consistent with a study by (Rabiner et al. 2000), which was conducted on 620 primary school students from eight schools in the United States. Their academic achievement in reading, mathematics, and written language was evaluated at the end of the academic year by their teachers employing the "Conners Rating Scale" to detect attention deficit problems. The results indicated a 76% decline in reading performance among students who exhibited symptoms of attention deficit compared to those who did not exhibit

symptoms. Similarly, in terms of written language, the performance of students with attention deficits was 92% lower than that of their non-affected peers.

This sample of studies and others confirms the negative impact of attention distractions in the school environment on performance, both for teachers and students, which adversely affects academic achievement. This can be explained by the theory of single-source attention, which states that humans can only pay attention to one stimulus at a time and process it, unable to process multiple stimuli simultaneously. This theory is based on several assumptions, indicating that information goes through stages (recognition stage, response selection stage, response execution stage). Attention is a single-source capacity that cannot be directed to more than one stimulus; it is a limited energy that can focus on a specific stimulus while ignoring other stimuli (Hibatullah Dawood, 2015, p. 50).

This is actually observed in classrooms where attention distractions are abundant, making it difficult to concentrate on essential stimuli related to the lesson, thus weakening academic performance. (Norman 1981) suggests that cognitive failures occur, at least partially, due to a failure of attentional control when attention is not occupied with an immediate task and instead focuses on external or internal distractions. In such conditions, cognitive failure is inevitable (Hussein, 2013, p. 16). Broadbent argues that processes in both the short-term memory store, selective filter, and limited capacity system co-occur. The initial analysis of stimuli occurs in short-term memory, followed by the selection of relevant information in the selective filter, and then meanings, interpretations, and encoding take place in the limited capacity system where recognition occurs. Since the limited capacity system cannot accommodate more than one piece of information from one channel at a time, the selective filter between the short-term memory and the limited capacity system allows attention to only one source of information. This is where cognitive failure can occur when the individual fails to identify the most critical stimulus, allowing the selective filter to pass the second stimulus to the limited capacity system. Retrieval failure may occur due to the short duration of information processing, as the shorter the duration, the less information can be processed, resulting in difficulty in retrieval (Hussein, 2013, pp. 64-65).

Therefore, having a classroom environment free from attention distractions or minimizing them is of utmost importance. If we would like to achieve good academic achievement, we must provide suitable learning conditions. Otherwise, significant efforts from both teachers and students will be in vain.

The world around us is filled with various stimuli that are impossible to grasp or pay attention to fully. These stimuli exceed the limits of the human capacity to perceive and attend to them due to the inherent limitations of our neural abilities to process such stimuli. Even if individuals were able to perceive a vast number of stimuli, our brains would struggle to process this amount of information due to the limitations of our processing and information-processing capabilities. On the one hand, our sensory system, like any well-functioning system, operates effectively when the quantity of processed information falls within its limits or capacities (Al-Zayyat, 2005, p. 222).

Behaviorists agree on the significance of environmental conditions surrounding the learner and consider them a decisive factor in learning. They heavily rely on the role of the teacher in organizing and preparing the classroom to facilitate learning (Radi, 2012, p. 229). Besides, (Hamada 1991) highlights that it is essential to note that children's problems mainly originate from unsuitable environmental conditions rather than genetics, except in limited cases. These environmental conditions may be related to the family, school, or community in which the child lives (Mallou Mamoun, 2007, p. 17).

The constant interaction and engagement of humans with their environment necessitate that they first understand this environment in order to adapt to it, use it, protect themselves from its dangers, and participate in its activities. The first condition for this understanding is to pay attention to and perceive what matters to them in this environment through their senses, allowing them to influence and control it using their intellect and muscles. Attention and sensory perception are the first steps in an individual's connection with their environment and their adaptation to it. In fact, they are the foundation upon which all other cognitive processes rely. Without attention and sensory perception, individuals would not be able to perceive, remember, imagine, learn, or think. In order to learn or think about something, we must first pay attention to it (Rajeh, 2009, p. 155)

The study results can be summarized as follows

- Attentional distractors negatively affecting the classroom learning process include auditory and visual stimuli, according to the study sample's opinions.
- The overall mean score for the impact of attentional distractors on the classroom learning process for primary school students in Laghouat is high, as indicated by the study sample's opinions.
- The negative impact of attentional distractors leads to a decline in students' academic achievement.

Based on these results, and considering the significant negative impact of attentional distractors on classroom learning in primary education, several suggestions are proposed for minimizing or alleviating this issue:

- Constructing schools in noise-free locations.
- Keeping the classroom free from stimuli unrelated to classroom learning.
- Ensuring a suitable learning environment (appropriate lighting, ventilation, space capacity, heating, etc.).
- Standardizing students' study schedules.
- Separating playgrounds and cafeterias from classrooms.
- Parent-teacher visits should occur outside of study periods (during break times).
- Implementing a uniform dress code for students.
- Ensuring teachers' attire is appropriate and educational.
- Using appropriate and purposeful teaching aids.
- Writing on the board clearly in colors and using drawings for illustration.

- Educators should be well-versed in addressing attentional distraction problems by creating a classroom environment free from distracting stimuli, especially visual and auditory ones, and strengthening stimuli related to classroom learning.
- School administration should be aware and concerned about classroom learning within the school, coordinating with parents and educators through monitoring.
- Parents should focus on proper upbringing and education for their children, accompany and monitor them during their studies, and work to provide a suitable environment, whether in the home or school, as a positive and stimulus-free environment significantly contributes to building a healthy personality.
- Having specialists in school psychology in elementary schools to closely monitor classroom issues in terms of diagnosis and provide correct methods for treatment in collaboration with parents and educators.
- Organizing conferences, seminars, and study days on classroom issues in the educational environment, led by specialized university professors in psychology, in coordination with the education sector."

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