ARGUMENTATIVE CONNECTOR USE AMONG CONGOLESE SECONDARY SCHOOL STUDENTS

Abstract

This article examines argumentative connector use among Congolese secondary school students and the difficulties they encounter in producing coherent argumentative texts. Given the importance of connectors for textual cohesion and the organization of reasoning, the study seeks to identify obstacles to their mastery and propose remedial teaching strategies. Using quantitative and qualitative approaches, the research draws on an analysis of 267 written scripts produced by students in the upper secondary humanities track at Nganga Edouard and Lumumba high schools in Brazzaville, together with six classroom teaching logs. Data were collected through a test requiring students to write argumentative paragraphs. The findings indicate relatively good command of common connectors such as par exemple (for example), en plus (in addition), ensuite (then), mais (but), and parce que (because). However, students experience substantial difficulties with connectors expressing concession, opposition, and restriction. The most frequent errors involve inappropriate or mechanical use, confusion between connector functions, and excessive repetition. The findings suggest limited control of connectors' semantic values and a need for contextualized instruction, without establishing a causal relationship between teaching practices and performance. It recommends explicit instruction, integration of connectors into writing and rewriting activities, and exercises that develop understanding of logical relations and argumentative coherence.

Keywords: logical connectors, Congolese students, difficulties, remedial instruction

INTRODUCTION

Argumentation, whether spoken or written, is essential to education and civic participation. It enables individuals both to persuade others and to organize and structure their reasoning. It relies on linguistic mechanisms that ensure discourse coherence, cohesion, and progression. Argumentative connectors are prominent among these mechanisms.

Argumentative connectors are linguistic expressions that make relationships between propositions explicit and help readers interpret the progression of discourse (Charolles, 1995; Schlamberger Brezar, 2002). They can organize arguments, introduce justification, and signal a change in argumentative direction. Appropriate use supports written and spoken communication, whereas an unsuitable connector can obscure the intended relationship between ideas.

Textual cohesion and coherence should nevertheless be distinguished. Connectors provide explicit cohesive cues, but coherence also depends on the content of propositions, contextual information, and the inferences readers can draw (Charolles, 1995). The presence of a connector alone therefore does not guarantee a coherent argument.

From a pragmatic perspective, connectors contribute to the interpretation of relationships between utterances and to the orientation of argumentation (Moeschler & Reboul, 1994; Schlamberger Brezar, 2002). Their functions include addition, contrast, justification, concession, and conclusion.

UNDER PEER REVIEW IN IJAR

These functions must be assessed in context, since the same form can serve different discourse purposes.

In educational settings, command of connectors supports students' ability to organize ideas and make the relationships between arguments explicit. Teaching should therefore address how these forms operate in connected discourse, rather than rely solely on memorized lists (Elalouf & Trévise, 2011; Mahmudova, 2017).

In reasoning tasks such as essays, discussions, summaries, literary commentaries, and debates, argumentative connectors are fundamental to the quality of students' work. This established principle in language education also applies to Congolese students, whose writing depends on the same requirements of textual cohesion. Recognized as resources for organizing reasoning and argumentative progression, logical connectors form part of the French language curriculum in the Congo and are valued as indispensable tools for producing structured and rigorous discourse.

Despite existing teaching arrangements, many students struggle to use these connectors, which weakens the quality of their discourse. Their difficulties include confusion between connector functions, mechanical use, and repetition or redundancy that fragments the text and impairs clarity. These problems affect discourse organization and performance, thereby compromising the quality of argumentation.

In educational settings where argumentative proficiency is a major assessment criterion, understanding the causes of these difficulties is necessary to develop appropriate remedial teaching strategies.

The study therefore has two main contributions. First, it contributes to French language education by identifying students' difficulties with logical connectors in general and argumentative connectors in particular. Second, it examines teaching practices, suggesting that these difficulties relate both to learners and to how connectors are taught. The analysis seeks to advance research on students' discourse competence and provide practical guidance for teaching argumentation and improving performance in curricular tasks such as essays, discussions, literary commentaries, and debates.

The central research question is: What specific difficulties do students encounter when using argumentative connectors?

This main question gives rise to the following subsidiary questions:

– What are the sources of these difficulties, particularly in relation to teaching practices?

UNDER PEER REVIEW IN IJAR

– What instructional strategies can improve students' command of connectors, help them overcome these difficulties, and strengthen the quality of their argumentation?

The study therefore aims to:

– Identify the main difficulties students encounter when using argumentative connectors;

– Analyze the sources of these difficulties, with particular attention to teaching practices;

– Propose appropriate remedial teaching strategies to improve students' command of connectors and strengthen their argumentative competence.

Previous research documents recurrent difficulties with connector use in French. Tugbogh and Lambon (2025), working with secondary school learners in Ghana, identified inappropriate, insufficient, and repetitive uses. Epundu and Onah (2022) examined similar difficulties among university learners in Nigeria. Elalouf and Trévise (2011) showed that lists and imprecise descriptions in curricular materials can obscure connectors' interpretive functions. Atamna (2013) and Diatta (2021) also investigated logical connectors in secondary school writing. More recently, Sahnoun and Houcini (2025) found limited and frequently inappropriate use among Algerian secondary school students, with some complex connector categories receiving little attention in learners' texts.

These convergent findings reveal a major instructional problem in the teaching of logical connectors. They support integrating connector instruction into reasoning tasks to strengthen mastery and improve students' argumentative competence.

Comparative exercises, writing and reformulation activities, and practice within continuous texts emerge as useful strategies for improving connector knowledge and use. These approaches can help students treat connectors as tools for thinking and organizing discourse rather than merely as linking words.

Building on this research, the present study analyzes the specific obstacles students encounter and proposes appropriate instructional responses.

The article addresses four main areas: the theoretical framework, the methodology, the findings, and a discussion of the findings and instructional implications.

1. Theoretical framework

1.1. Definition and functions of argumentative connectors

Plantin (2021) describes argumentative connectors as multifunctional linking expressions that can mark relationships between arguments and conclusions. Their argumentative function depends on

UNDER PEER REVIEW IN IJAR

the discourse sequence in which they occur; a particular form should not be assigned a single function in every context.

Discourse analysis relates the organization of texts to their communicative situation (Maingueneau, 2016). Applied to connectors, this perspective requires attention to the ideas being linked, the writer's intended stance, and the interpretation made available to the reader.

For Mahmudova (2017), argumentative connectors are linguistic markers that bridge sentence grammar and text grammar by ensuring thematic progression and clarity of reasoning. This linguistic dimension is essential to students' ability to produce robust and comprehensible argumentative discourse.

Connectors contribute to the organization of argumentative sequences by making relationships between the thesis, supporting reasons, counterarguments, and examples explicit (Adam, 2001). They can function as interpretive cues, but do not by themselves ensure coherence (Charolles, 1995). Their appropriateness depends on the relationship established by the surrounding propositions. In educational writing, students need to choose connectors that match both the intended logical relation and the grammatical construction.

1.2. Types of argumentative connectors

The main categories of argumentative connectors are presented below.

Table 1. Argumentative connectors

Function	French connectors	Specific role
Opening	premièrement, d'une part, d'abord…	Begin a line of reasoning
Addition	et, puis, de plus, en outre, ensuite, par ailleurs, mais encore, aussi, deuxièmement, d'autre part	Extend a previously introduced idea
Opposition	mais, cependant, en revanche, au contraire, alors que, tandis que, par contre, or…	Introduce a contrasting idea
Restriction	toutefois, néanmoins, seulement…	Qualify an idea
Cause and explanation	car, parce que, puisque, en effet	Provide a reason or explanation
Consequence	donc, ainsi, par conséquent, c'est pourquoi, de ce fait, en conséquence, si bien que…	Show an argument's logical outcome
Concession	certes…mais, bien que, quoique, même si…	Acknowledge an objection
Illustration	par exemple, notamment, ainsi (depending on context)	Introduce a specific example

UNDER PEER REVIEW IN IJAR

2. Methodology

2.1. Research approach and setting

The study combines quantitative and qualitative analyses to examine students' difficulties with argumentative connectors. Fieldwork was conducted in four upper secondary humanities classes at Nganga Edouard and Lumumba high schools in Brazzaville. The two schools were selected to diversify the corpus. The available sampling information does not establish statistical representativeness.

2.2. Sample and corpus

The corpus comprised 267 student scripts: 123 from Nganga Edouard and 144 from Lumumba. Six classroom teaching logs were also examined to assess the frequency and context of connector instruction.

2.3. Data collection instruments

Two data collection instruments were used to achieve the research objectives:

– Documentary analysis of the curriculum and classroom teaching logs;

– A written test requiring argumentative paragraphs, used to collect evidence of students' actual connector use through analysis of their scripts.

2.4. Test task

Prompt

- Statement supplied in the test: "Work ensures independence" (attributed in the test prompt to Bernard Binlin Dadié's Climbié).

  Instructions: Using the statement as a starting point, write five argumentative paragraphs: two supporting it, two challenging it, and one offering a synthesis that moves beyond this opposition.

The prompt was intended to elicit contrasting arguments on a familiar social issue and provide evidence of connector use across supporting, opposing, and synthesizing paragraphs. Familiarity with the topic was an assumption underlying the task, rather than an independently assessed characteristic of participants.

2.5. Data processing analysis and coding

Quantitative analysis used the counts reported for each connector. Usage percentages were calculated by dividing each reported count by 267, the number of scripts. Correct-use and incorrect-use percentages were calculated using the reported total for the relevant connector as the

UNDER PEER REVIEW IN IJAR

denominator. These calculations describe the supplied coding; they do not constitute a new coding of the original student scripts. Qualitative analysis examined the semantic relationship between linked propositions and, where relevant, the grammatical construction. Participants' anonymity was protected through the following script codes:

– LNE.1 denotes Nganga Edouard High School, script no. 1.

– LL.5 denotes Lumumba High School, script no. 5.

3. Findings

3.1. Analysis of classroom teaching logs

The six teaching logs recorded connector instruction in general terms, with limited differentiation between categories and limited documentation of their integration into extended writing tasks. This finding suggests a possible gap in instructional planning, but teaching logs alone cannot establish the full range of classroom practices or their effects on learning.

3.2. Written test

The written test involved 267 students. The qualitative presentation groups selected extracts by connector function and contrasts appropriate uses with problematic or context-dependent uses. Because isolated extracts do not always include the preceding paragraph, judgments about interparagraph relations must be treated cautiously.

Presentation note: Student extracts are translated into English, with the French connectors under analysis retained in brackets. Problematic connector choices and incomplete constructions are preserved because they constitute the linguistic evidence examined in the study. The commentary distinguishes semantic appropriateness from grammatical accuracy.

3.2.1. Qualitative analysis

3.2.1.1. Opening connectors

Analysis of the scripts showed that tout d'abord (first of all) and premièrement (firstly) were the only opening connectors regularly used. Selected examples are presented below.

Examples classified as appropriate uses of opening connectors

LNE.6: "First of all [tout d'abord], work is a source of liberation for human beings. For it offers several benefits. For example, the money earned through work enables people to meet various needs, including food, health care, clothing, and many others."

LL.32: "Firstly [premièrement], work ensures independence by enabling people to meet their needs. Indeed, the income it provides promotes financial autonomy and personal dignity and enables people to meet their basic needs without depending on others. For example, workers

UNDER PEER REVIEW IN IJAR

who receive their salary regularly can pay their rent, provide food, and support their families without seeking outside assistance."

These two extracts illustrate appropriate uses of tout d'abord and premièrement, which open an organized argument and guide readers through the subsequent reasoning.

Examples classified as inappropriate uses of opening connectors

LNE.5: "Yes, the only means by which people can free themselves from the troubles of life and society is work. In addition [en plus], work also has many advantages in human life. First [d'abord], the money people earn through work enables them to meet their family's basic needs."

LL.28: "Admittedly [certes], work is the only way to fight poverty and suffering firstly [premièrement] it enables us not to suffer in life and not to become beggars…"

In these extracts, d'abord preceded by en plus, and premièrement preceded by certes, are awkwardly placed because they disrupt the logical ordering of arguments.

3.2.1.2. Additive connectors

The additive connectors most frequently used by students were ensuite (then), en plus (in addition), en outre (furthermore), de même (similarly), and aussi (also). Examples illustrating both appropriate and inappropriate uses are provided below.

Examples classified as appropriate uses of additive connectors

LNE.19: "In addition [en plus], work enables people to become integrated into society by earning them consideration and esteem and allowing them to participate actively in social life and be appreciated for their skills and contribution to society's development. Indeed, people who do useful work feel valued and find their place in society more easily. For example, someone who treats patients and helps save lives earns the population's respect and recognition through their work."

LNE.13: "Furthermore [en outre], poorly suited work is a source of exhaustion because people who do a job that matches neither their abilities nor their skills find it harder to perform and tire quickly. Indeed, lack of motivation can cause stress, discouragement, and even physical and mental exhaustion. For example, teachers asked to teach a subject they do not sufficiently understand suffer considerably, become tired, and quickly lose motivation."

UNDER PEER REVIEW IN IJAR

LL.77: "Similarly [de même], work sometimes alienates, degrades, and diminishes people because certain jobs undermine human dignity and social respect. Indeed, work performed under degrading, humiliating, or dangerous conditions can cause people to lose their sense of worth and honor. For example, workers forced to work in unsanitary conditions without protection and for very low pay may face humiliation and contempt. Thus, although all work deserves consideration, certain jobs can degrade human beings when performed under degrading conditions."

These additive connectors can maintain argumentative continuity when they extend a preceding argument of the same orientation. Their full appropriateness depends on the preceding paragraphs, which are not reproduced here.

Examples classified as inappropriate uses of additive connectors

LNE.26: "Work enables people to become financially autonomous and meet their needs. Their earnings allow them to support their families and improve their living conditions. Similarly [de même], some workers experience poor working conditions. They may work hard for long periods under dangerous conditions while receiving low wages. For example, many employees work for hours without adequate rest or satisfactory pay."

LNE.107: "Work enables people to meet their needs and improve their living conditions. It also provides a degree of financial independence and allows them to contribute actively to society's development. Also [aussi], some people prefer to stay home during holidays to rest. They use this time to be with their families. For example, employees may choose to remain at home during leave to rest and spend time with relatives."

LL.19: "Work enables people to meet their essential needs and live with dignity. It provides income for food, housing, and family care. Furthermore [en outre], it should be remembered that people need sufficient sleep to stay healthy. Indeed, sleep enables the body to recover after the day's efforts. For example, workers who sleep eight hours a night are also calmer and more effective in their activities."

LL.83: "Work enables people to earn money and meet their daily needs. Their salary covers food, housing, health care, and their children's education. Then [ensuite], unemployment is a difficult situation for many people. Indeed, a lack of employment often deprives individuals

UNDER PEER REVIEW IN IJAR

of income and can cause social and family difficulties. For example, unemployed people may struggle to pay rent or meet their children's needs."

These extracts reveal different kinds of discontinuity. De même in LNE.26 introduces poor working conditions after a statement about financial autonomy, creating a contrast rather than a clear parallel. Ensuite in LL.83 marks a shift from employment to unemployment that would be clearer with an explicit contrast. In LNE.107 and LL.19, the main problem is a weakly explained thematic transition to holidays or sleep, rather than an inherent opposition between the propositions. In those cases, revising the relationship between ideas is more important than simply substituting a connector.

3.2.1.3. Opposition connectors

The data show that mais (but), cependant (however), par contre (by contrast), and or (yet) were the most frequently used opposition connectors. Selected examples are presented below.

Examples classified as appropriate uses of opposition connectors

LNE.23: "But [mais] independence does not depend on work alone. Some people have resources from an inheritance, investments, or other income that allow them to live without working. Thus, independence can be achieved through means other than work."

LNE.36: "By contrast [par contre], having a job is not always sufficient to be independent. Even while working, some people remain poor and dependent on others because their income does not cover essential needs such as food, housing, health care, clothing, and many others. In this case, work is insufficient to ensure independence because the income is negligible."

LL.30: "However [cependant], work does not always guarantee independence. In some contexts, it can mean exploitation and suffering. Despite their efforts, poor workers remain dependent on their employers and cannot escape poverty. In this sense, work does not liberate people but turns them into prisoners."

In these paragraphs, cependant, mais, and par contre are used appropriately because they introduce ideas that challenge the thesis stated in the prompt.

Examples classified as inappropriate uses of opposition connectors

LNE.101: "Yet [or], by engaging in an activity, people acquire knowledge that enables them to manage their lives more easily and avoid troubling others. Because good work provides material security that enables them to plan for the future and live independently…"

UNDER PEER REVIEW IN IJAR

LL.25: "Work gives people the opportunity to manage their own wealth. By contrast [par contre], by earning money, they can freely decide what to do with it. This gives them real freedom and therefore independence from others. However [cependant], through work, everyone learns to assume responsibilities. This ability to meet one's needs strengthens personal freedom and independence."

LL.54: "If people do not work, they will not eat, for people shall eat by the sweat of their brow, as the Bible says. But [mais] poorly chosen or poorly performed work does not necessarily bring happiness but [mais] there are also jobs that degrade people…"

The uses of par contre and cependant in LL.25 are poorly motivated because the following propositions reinforce, rather than oppose, the benefits of work. The opening or in LNE.101 cannot be evaluated conclusively without the preceding discourse. LL.54 does contain a plausible contrast between the necessity of work and the disadvantages of unsuitable work; its difficulties concern phrasing and repeated mais rather than a complete absence of opposition. These distinctions prevent different error types from being conflated.

3.2.1.4. Explanatory connectors

The explanatory connectors most commonly used by students were car (for), en effet (indeed), and ainsi (thus). Selected examples follow.

Examples classified as appropriate uses of explanatory connectors

LNE.119: "Work is a source of dignity and social recognition because it gives people a place and a role in society. Indeed [en effet], it promotes personal development and skill acquisition. For example, employees who invest in their work acquire new knowledge and become more confident, strengthening their contribution to society."

LL.63: "Many people are able to make important life decisions independently because their employment gives them the freedom to act according to their convictions. For [car], by engaging in balanced professional activity, they are no longer forced to submit to others' wishes to satisfy their needs or carry out their plans. In this respect, work is a real source of freedom. For example [par exemple], young workers can choose where to live or finance their studies with their own resources without relying on someone else."

LL.66: "Independence or freedom cannot be obtained through determination alone; it also requires concrete resources. Indeed [en effet], work enables everyone to develop skills, gain experience, and acquire the confidence needed to face life's challenges. This ability to take

UNDER PEER REVIEW IN IJAR

responsibility for oneself promotes individual independence. This is the case of entrepreneurs who build their own future through their activities."

These extracts illustrate relevant explanatory and illustrative relations. Car justifies the paragraph's main idea by introducing an argument, while par exemple clarifies that argument through an illustration.

Examples classified as inappropriate uses of explanatory connectors

LNE.15: "Indeed [en effet], work has always remained the main guarantee of human happiness. For [car], it protects people from life's vices. For example, it prevents them from becoming beggars, idle, and so on."

LL.52: "For [car], in life, if you do not work, you cannot be happy because without work you cannot meet life's needs. For example, buying food, buying medicine when you are sick, renting a house—in short, being comfortable."

LL.125: "For, indeed [car, en effet], without work there is no success. This is why we must restore a taste for sustained effort to create hardworking citizens and future adults. By contrast [par contre], why are young people so lazy nowadays?"

Car and en effet normally connect a justification or explanation to a proposition recoverable from the preceding discourse. They may occur at the beginning of a sentence, so sentence-initial position is not itself an error. In these extracts, the issue is whether an antecedent claim is available. LL.125 also combines car and en effet redundantly. Where no claim precedes the extract, a clearer formulation would state the main proposition first and then introduce its justification.

3.2.1.5. Concessive connectors

Data analysis showed that bien que (although) and certes…mais (admittedly…but) were the concessive connectors most frequently used. Examples are presented below.

Examples expressing a concessive relationship

LNE.84: "Although [bien que] human dignity rests mainly on work, which enables people to be free and escape dependence, but [mais] to be happy, people must know how to choose and organize their work. For some jobs make people slaves to their employer or their activity. Otherwise, if work is badly organized, instead of being a source of happiness, it becomes a source of unhappiness and prevents people from living freely according to their desires, choices, and preferences."

UNDER PEER REVIEW IN IJAR

LL.137: "Admittedly [certes], work provides financial stability, but [mais] it can also be a source of suffering, stress, and fatigue. In some companies with excessive working hours and very high demands, employees generally suffer a great deal…"

LL.44: "Admittedly [certes], work is a fundamental means of achieving independence through the income it provides, but [mais] some excessively demanding activities or occupations impose difficult working conditions that unfortunately degrade employees instead of making them happy. In this sense, work appears as a form of torture and a source of degradation."

LL.137 and LL.44 establish a clear concessive relationship through certes…mais. LNE.84 also conveys concession, but the combination bien que…mais is grammatically redundant. A corrected French construction would be: "Bien que la dignité humaine repose en grande partie sur le travail, celui-ci doit être bien choisi et organisé pour contribuer au bonheur." Semantic appropriateness and grammatical accuracy must therefore be evaluated separately.

Examples classified as inappropriate uses of concessive connectors

LNE.78: "Work plays an essential role in human life. It enables people to meet their needs and participate actively in society's development. Through their professional activity, everyone can improve their living conditions and build their future. Admittedly [certes], work provides income, but [mais] it also promotes financial autonomy, responsibility, and self-confidence. Thus, work contributes to personal and social development."

LNE.122: "Work is often considered a particularly effective way to achieve independence. It enables individuals to cover their expenses and carry out personal projects. Although [bien que] work ensures some financial stability and promotes social integration. It is therefore an important factor in success and integration. Although [bien que] this activity plays an important role in human emancipation. It remains a determining factor in social success."

LL.47: "Work is often presented as the key to independence. Indeed, it enables people to earn a living and assume their responsibilities without depending on others' assistance. It also contributes to social integration and personal development. Admittedly [certes], work helps meet daily needs, but [mais] it also finances important projects and develops organizational skills. Given its many benefits, it is essential to society. Although [bien que] work is also an effective means of contributing to a country's economic progress. For all these reasons, it is indispensable to life."

UNDER PEER REVIEW IN IJAR

The concessive relationship is not established in these extracts: the propositions linked by certes…mais largely develop compatible advantages of work. An additive connector would better express the intended relation. In LNE.122 and LL.47, bien que also introduces subordinate clauses that are left without an appropriate main clause. Correcting these passages requires both a suitable discourse relation and a complete grammatical construction.

3.2.1.6. Illustrative connectors

The data show that par exemple (for example) and c'est ainsi que (this is how) were the illustrative connectors most frequently used by students. Selected examples follow.

Examples classified as appropriate uses of illustrative connectors

LNE.39: "In addition, some jobs degrade and diminish people because they can undermine their dignity and social standing. Indeed, work performed under poor, degrading, humiliating, or dangerous conditions can cause people to lose their sense of worth and honor. For example [par exemple], workers forced to work under poor conditions for very low pay are exposed to humiliation and contempt. Therefore, although all work deserves consideration, some jobs degrade people."

LL.60: "Independence often results from efforts made through work, which offers several advantages that contribute to personal independence. By working, people acquire the resources needed to fulfill personal and family responsibilities. They also develop skills that strengthen their confidence and ability to act autonomously. For example [par exemple], people with stable employment can carry out their plans, make personal choices without troubling anyone, and build their lives."

LL.93: "Work plays an important role in everyone's emancipation. It not only provides regular income but also promotes social integration and personal development. Through the activities they undertake and the responsibilities they assume, workers learn to manage their lives independently. This is how [c'est ainsi que] many people achieve financial independence, start a family, and participate actively in social development."

Par exemple in LNE.39 and LL.60 introduces concrete cases that support a general argument. In LL.93, c'est ainsi que explains how the outcomes arise and can have a consequential or process-related value. It should therefore not automatically be treated as an illustration marker independent of context.

UNDER PEER REVIEW IN IJAR

Examples classified as inappropriate uses of illustrative connectors

LNE.13: "Work is essential to human life. It enables people to participate in society's development while improving their own living conditions. Through work, human beings distinguish themselves from animals, strengthen their abilities, and develop responsibility. For example [par exemple], work also promotes financial freedom and helps everyone achieve their dreams."

LNE.67: "Work contributes greatly to individual development. It enables people to acquire practical knowledge and build relationships in society and the workplace. Furthermore, it provides the resources needed to meet daily needs. This is how [c'est ainsi] it is also a source of dignity and personal recognition. It therefore contributes to the construction of individual identity."

LL.24: "Work plays an important role in a country's economic development. When many citizens work, production increases and wealth grows. Moreover, work promotes social integration and family well-being. This is how [c'est ainsi que] many people regard work as a fundamental value and a means of achieving social success."

In LNE.13, par exemple introduces a further general claim rather than a concrete example, so an additive connector would be more suitable. In LNE.67, c'est ainsi is syntactically incomplete in this construction; c'est ainsi que would be required, although an additive formulation may better fit the intended meaning. In LL.24, c'est ainsi que can be interpreted as introducing a consequence or explanatory reformulation. Its use is not necessarily erroneous; the relevant issue is whether the intended relation is made sufficiently clear.

3.2.1.7. Restrictive connectors

The analysis showed that toutefois (however) and néanmoins (nevertheless) were the restrictive connectors most frequently used by students. Selected examples follow.

Examples classified as appropriate uses of restrictive connectors

LNE.103: "Work is one of the main ways of achieving independence. Through the income it generates, it enables workers to meet daily needs and carry out various plans. However [toutefois], this independence is not automatic from the outset. It also requires sound resource management and a strong sense of responsibility…"

UNDER PEER REVIEW IN IJAR

LL.74: "Work ensures financial independence by providing the resources needed to meet basic needs. However [toutefois], achieving this independence does not depend solely on having a job. It also depends on the ability to manage income and make responsible decisions."

LL.125: "Work plays an important role in human emancipation. It promotes skill development, strengthens self-confidence, and provides the resources needed to build a future. Some activities can be difficult and require enormous sacrifices. Nevertheless [néanmoins], these constraints do not cancel out the benefits of work. By enabling everyone to live on the fruits of their efforts, work contributes greatly to independence."

Toutefois and néanmoins are used appropriately insofar as they qualify the preceding idea or introduce a concession. They ensure coherent argumentative progression by linking partially opposing ideas.

Examples classified as inappropriate uses of restrictive connectors

LNE.102: "Work is one of the main ways people can become independent and autonomous. By practicing a trade, they earn money that enables them to support themselves and meet daily needs. Work also promotes personal and societal development. However [toutefois], it also provides the means to carry out plans such as building a home and educating children. Thus, work contributes effectively to improved living conditions."

LL.58: "In society, work plays an important role in organizing individual lives. It provides essential income for personal and family well-being. Through experience acquired over time, workers develop organizational skills and responsibility. Nevertheless [néanmoins], work also brings satisfaction by recognizing their efforts."

In these two paragraphs, toutefois and néanmoins are used inappropriately because the clauses they introduce do not oppose the preceding ideas. Instead, they add further benefits of work, disrupting argumentative coherence. Additive connectors such as de plus, par ailleurs, or en outre would be more appropriate.

3.2.2. Quantitative analysis

Table 2. Quantitative findings

Connector	Reported uses (n)	% of 267	Correct (n)	%	Incorrect (n)	%

UNDER PEER REVIEW IN IJAR

Connector	Reported uses (n)	% of 267	Correct (n)	%	Incorrect (n)	%
OPENING CONNECTORS						
Premièrement	—	—	—	—	—	—
Tout d'abord	—	—	—	—	—	—
ADDITIVE CONNECTORS						
Ensuite	84	31.46%	69	82.14%	15	17.86%
En plus	156	58.43%	117	75.00%	39	25.00%
De même	13	4.87%	06	46.15%	07	53.85%
En outre	7	2.62%	02	28.57%	05	71.43%
Aussi	**7**	2.62%	02	28.57%	05	71.43%
OPPOSITION CONNECTORS						
Mais	102	38.20%	73	71.57%	29	28.43%
Cependant	86	32.21%	28	32.56%	58	67.44%
Par contre	78	29.21%	23	29.49%	55	70.51%
Or	01	0.37%	01	100.00%	00	0.00%
EXPLANATORY CONNECTORS						
Car	146	54.68%	69	47.26%	77	52.74%
En effet	32	11.99%	08	25.00%	24	75.00%
Ainsi	11	4.12%	03	27.27%	08	72.73%
Parce que	78	29.21%	51	65.38%	27	34.62%
CONCESSIVE CONNECTORS						
Certes…mais	39	14.61%	08	20.51%	31	79.49%
Bien que	08	3.00%	01	12.50%	07	87.50%
ILLUSTRATIVE CONNECTORS						
Par exemple	221	82.77%	192	86.88%	29	13.12%
C'est ainsi …	46	17.23%	17	36.96%	29	63.04%
RESTRICTIVE CONNECTORS						
Toutefois	43	16.10%	13	30.23%	30	69.77%
Néanmoins	18	6.74%	04	22.22%	14	77.78%

Note. Usage percentages use 267 scripts as the denominator. Correct and incorrect percentages use the reported total for each connector. Different connectors may occur in the same script, so usage percentages do not sum to 100%. — = numerical data not reported. Percentages have been recalculated from the supplied counts; the original coding counts are retained.

UNDER PEER REVIEW IN IJAR

The recalculated percentages indicate uneven performance across connectors. Par exemple was used 221 times in the reported counts, with 192 correct uses (86.88%); ensuite had 69 correct uses out of 84 (82.14%); en plus, 117 out of 156 (75.00%); mais, 73 out of 102 (71.57%); and parce que, 51 out of 78 (65.38%). Correct-use rates were lower for certes…mais (20.51%), bien que (12.50%), toutefois (30.23%), and néanmoins (22.22%). The single reported use of or was coded as correct, but a count of one does not support a broader inference about mastery. Because usage totals vary and the original scripts were not recoded, these figures should be interpreted as descriptive indicators of the supplied classification, rather than as a comprehensive measure of individual proficiency.

4. Discussion and instructional implications

This section examines students' specific difficulties with logical connectors and considers remedial teaching strategies.

4.1. Discussion of the findings

4.1.1. Students' difficulties with argumentative connectors

The reported counts suggest better performance with several familiar connectors, including par exemple, en plus, ensuite, mais, and parce que. Lower correct-use rates occur with several concessive and restrictive forms. This pattern is compatible with difficulties in managing more complex argumentative relations, but frequency of use alone does not explain the differences. The qualitative extracts also show that judgments must distinguish grammatical construction, semantic relation, and the availability of preceding context. The main difficulties include the following:

Unsystematic and inappropriate use: Students select connectors without first checking the logical relationship between the ideas being linked, producing argumentative inconsistencies.

Confusion between connector categories: Students often assume that inserting a connector is sufficient to make a text flow, without ensuring that the argumentative relationship is appropriate.

Mechanical use: Students employ connectors automatically without respecting the logical relationships they are intended to express, leading to inconsistencies in discourse organization.

- Repetition: Students frequently reuse a limited set of connectors. This may reflect a restricted repertoire or uncertainty about alternative forms. The study does not

UNDER PEER REVIEW IN IJAR

independently measure linguistic insecurity or establish an effect of multilingualism on these choices.

These findings are consistent with Gouasmia (2021), who identified difficulties in students' use of argumentative connectors, particularly in organizing ideas and linking them logically.

They also align with Tugbogh and Lambon (2025), whose work identified appropriate, inappropriate, insufficient, and repetitive connector use in students' texts, resulting in writing that lacked coherence and adequate structure. This observation is consistent with our finding that some connectors are used successfully while more complex ones produce numerous errors. Students appear to rely on familiar connectors at the expense of the broader repertoire needed for more developed argumentation.

Sahnoun and Houcini (2025) likewise reported difficulties with diverse connector categories among Algerian secondary school students. This comparison supports attention to complex relations, while differences in populations, tasks, and coding procedures limit direct comparison of rates.

The observed difficulties indicate that students' argumentative competence remains fragile and underline the need for explicit, regular instruction in argumentative connectors within writing activities. Their competence is still developing.

Overall, convergence between our findings and previous research suggests that difficulties with argumentative connectors are a recurring issue in teaching and learning written French. Students appear to master elementary logical relationships but struggle to express more complex relations such as concession, restriction, and opposition. This highlights the need to strengthen explicit instruction in logical and argumentative connectors through regular, contextualized writing activities that develop argumentative competence.

4.1.2. Sources of students' difficulties

The data suggest several possible explanations. These are interpretations of the written productions and teaching logs, rather than independently established causal relationships:

- Limited control of semantic and discourse functions may contribute to mismatches between connector choice and the relationship intended between propositions.
- The limited contextualization documented in the teaching logs may constrain opportunities to practice connector choice in extended discourse. Elalouf and Trévise (2011) similarly criticize list-based treatment that fails to make interpretive functions explicit.

UNDER PEER REVIEW IN IJAR

- A shortage of contextualized practice is a plausible instructional explanation. However, the available records do not quantify students' actual exposure to such activities.
- A strong focus on isolated sentence grammar may leave insufficient room for organizing arguments across a paragraph or text. This interpretation calls for examination of classroom materials and observed lessons.
- Targeted reformulation, guided correction, and reflection on textual coherence could address the observed problems. The present data do not establish how frequently such remedial activities were used.

4.2. Instructional implications

In response to the difficulties identified, the proposed remedial strategies aim to improve students' command and appropriate use of argumentative connectors. They involve the following actions.

4.2.1. Explicit connector instruction

To address the difficulties identified, we propose the following activities, informed by the need to teach connectors in context (Elalouf & Trévise, 2011; Mahmudova, 2017):

– Use explicit activities to distinguish connector categories through model texts with clear progression. Comparative tables presenting functions and concrete examples can help students visualize each connector's role.

– Provide classification exercises in which students match connectors with their functions.

– Introduce visual representations, such as arrows and diagrams, to map logical relationships before selecting a connector.

– Encourage critical rereading to help students identify the logical relationship required between the opening sentence and the subsequent argument.

4.2.2. Integrating connector instruction into writing activities

Puren (2004) distinguishes learning tasks from social action within a co-actional perspective. Extending this general principle to the present findings, connector practice can be embedded in purposeful writing, rewriting, and debate. These activities should require students to explain the intended relationship between ideas and justify their choice of connector. The proposed application is a pedagogical recommendation, rather than an intervention tested in this study.

– Ask students to write short paragraphs on a given topic using a specified logical relationship.

– Provide incomplete sentences and ask students to fill the gaps with appropriate connectors.

– Provide connectors and ask students to write sentences using them.

UNDER PEER REVIEW IN IJAR

4.2.3. Rewriting activities

Remedial teaching can draw on four exercises:

– Provide a text containing repetitive connectors and ask students to replace repeated forms with alternatives sharing the same function and semantic value.

– Provide a text containing connector errors and ask students to identify and correct inappropriate uses.

– Provide a text with weak coherence and ask students to add connectors to link ideas more clearly.

– Provide disordered argumentative sequences and ask students to arrange them logically while inserting appropriate connectors.

CONCLUSION

This study examined argumentative connector use among students in the upper secondary humanities track at Lumumba and Nganga Edouard high schools in Brazzaville. It combined a descriptive analysis of 267 written scripts with examination of six classroom teaching logs. The writing task required students to develop supporting and opposing arguments and a synthesis on the relationship between work and independence.

The findings reveal several difficulties that undermine coherence and progression in students' writing. These include unsystematic and inappropriate connector use, confusion between functions, mechanical use, and overreliance on certain markers.

The findings suggest a need for stronger control of connector functions and more contextualized practice. The teaching logs indicate limited differentiation and integration in the recorded instruction, but they do not establish that particular teaching practices caused the observed difficulties.

Explicit instruction, targeted exercises, writing workshops, debates, and guided rewriting offer relevant responses to the difficulties identified. Their effectiveness remains to be evaluated through an instructional intervention. The findings are limited by the sampling information, the absence of reported independent coding checks, missing numerical data for opening connectors, and uncertainty about some context-dependent classifications. They should therefore inform further teaching and research without being generalized to all Congolese secondary school students.

UNDER PEER REVIEW IN IJAR

REFERENCES

Adam, J.-M. (2001). *Les textes : Types et prototypes. Récit, description, argumentation, explication et dialogue* [Texts: Types and prototypes. Narrative, description, argumentation, explanation, and dialogue]. Nathan.

Atamna, F. (2013). *L'emploi des connecteurs logiques dans la production écrite du texte argumentatif en FLE : Le cas des apprenants de troisième année du cycle secondaire du lycée Les Frères Regab à Ras El Oued, Bordj Bou Arréridj* [Logical connector use in argumentative writing in French as a foreign language] [Magister dissertation, Université Mohamed Khider de Biskra]. https://documentation.univ-biskra.dz/opac_css/index.php?id=111354&lvl=notice_display

Charolles, M. (1995). Cohésion, cohérence et pertinence du discours [Cohesion, coherence, and discourse relevance]. *Travaux de linguistique*, *29*, 125–151. https://hal.science/halshs-00334043

Diatta, M. (2021). *Étude syntaxique des connecteurs logiques dans la production écrite des élèves du cycle secondaire* [A syntactic study of logical connectors in secondary school students' writing] [Master's thesis, Université Assane Seck de Ziguinchor]. Rivières du Sud. https://rivieresdusud.uasz.sn/handle/123456789/1288

Elalouf, M.-L., & Trévise, A. (2011). Le traitement des connecteurs dans les Instructions officielles et les manuels (français L1 / anglais L2) [The treatment of connectors in official guidelines and textbooks (French L1 / English L2)]. *Revue française de linguistique appliquée*, *16*(2), 121–140. https://doi.org/10.3917/rfla.162.0121

UNDER PEER REVIEW IN IJAR

Epundu, A. C., & Onah, T. B. (2022). Enquête sur l'emploi des connecteurs logiques chez les apprenants universitaires de la langue française au Nigéria [A study of logical connector use among university learners of French in Nigeria]. *Revue d'études françaises des enseignants et chercheurs du village, 1*(3), 40–51. https://www.refecv.com/index.php/REFECV/issue/view/1

Gouasmia, L. (2021). Analyse des erreurs dans l'emploi des connecteurs argumentatifs dans la production écrite chez les apprenants de FLE [An analysis of errors in argumentative connector use in the writing of learners of French as a foreign language]. *Al-Jamie Journal, 6*(2), 1231–1248. https://asjp.cerist.dz/en/article/168106

Mahmudova, S. (2017). Les connecteurs, de la grammaire à la littéracie [Connectors, from grammar to literacy]. *Lidil, 56*. https://doi.org/10.4000/lidil.4757

Maingueneau, D. (2016). *Analyser les textes de communication* [Analyzing communication texts] (Rev. ed.). Armand Colin.

Moeschler, J., & Reboul, A. (1994). *Dictionnaire encyclopédique de pragmatique* [Encyclopedic dictionary of pragmatics]. Éditions du Seuil.

Plantin, C. (2021). Connecteurs argumentatifs [Argumentative connectors]. In *Dictionnaire de l'argumentation*. ICAR. https://icar.cnrs.fr/dicoplantin/connecteurs-argumentatifs/

Puren, C. (2004). De l'approche par les tâches à la perspective co-actionnelle [From a task-based approach to a co-actional perspective]. *Les cahiers de l'APLIUT, 23*(1), 10–26. https://doi.org/10.4000/apliut.3416

Sahnoun, D., & Houcini, B. (2025). Les connecteurs argumentatifs dans l'argumentation écrite : Cas des apprenants algériens de 3AS [Argumentative connectors in written argumentation among Algerian third-year secondary school students]. *Journal of Languages and Translation, 5*(1), 384–394. https://asjp.cerist.dz/en/article/262034

UNDER PEER REVIEW IN IJAR

Schlamberger Brezar, M. (2002). Le rôle syntaxique et pragmatique des connecteurs dans le discours argumentatif français [The syntactic and pragmatic role of connectors in French argumentative discourse]. *Linguistica, 42*(1), 89–110.

Tugbogh, L., & Lambon, A. K. (2025). Emploi des connecteurs dans les textes écrits par les apprenants de français au niveau du lycée dans la métropole de Tamale au Ghana [Connector use in texts written by secondary school learners of French in Tamale Metropolis, Ghana]. *Thèse/Synthèse, 5*(21), 35–77. https://edition-efua.acaref.net/wp-content/uploads/sites/6/2025/10/2-Lucio-TUGBOGH.pdf

UNDER PEER REVIEW IN IJAR