


Bilingual Educative Gap: A Socioeconomic View



La brecha educativa bilingüe: una realidad socioeconómica

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Abstract

Bilingual educational inequality in Colombia presents deficiencies around lack of infrastructure, resources, student permanence, among others. Therefore, the objective of this research was to analyze the differences between public and private education based on the results obtained in the Saber 11 tests, created by Colombian Institute for the Evaluation of Education (ICFES) in the area of English, in the last ten years (2010-2020) in Bogota and Medellin. This paper used mixed research as methodology, with a correlational method and a post-positivist paradigm employed in order to detect educational gaps and strategies to enhance bilingual competencies in the two educational sectors. The findings showed that public education has shortcomings in the performance of language skills as opposed to private academies and that the

policies of the bilingualism plan policies should develop technological and innovative strategies that contribute to the optimization of the language level.

Keywords:

public education; private education; English; standardized testing; saber 11; bilingualism.



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Resumen

La desigualdad educativa bilingüe en Colombia presenta deficiencias en torno a la falta de infraestructura, recursos, permanencia estudiantil, entre otras. Por consiguiente, el objetivo de esta investigación fue analizar las diferencias entre la educación pública y privada con base en los resultados obtenidos en las pruebas Saber 11 del Instituto Colombiano para la Evaluación de la Educación (ICFES) en el área de inglés, en los últimos diez años (2010- 2020) en Bogotá y Medellín. La metodología utilizada fue una investigación mixta, con un método correlacional y un paradigma post-positivista. Fueron empleados a fin de detectar las carencias educativas y estrategias para potenciar las competencias bilingües en los dos sectores educativos. Los hallazgos encontrados designaron que la educación pública tiene insuficiencias en el desempeño de las competencias lingüísticas en contraposición con las academias privadas. En ese sentido, las políticas del plan de bilingüismo deben efectuar el desarrollo de estrategias tecnológicas e innovadoras que contribuyan con la optimización del nivel de la lengua.

Palabras clave: educación pública; educación privada; inglés; pruebas estandarizadas; Saber 11; bilingüismo.

Introduction

This research is linked to the macroproject “Diagnostic evaluation of the results of the Saber 11 tests in the area of English and its relationship with connectivity data in Colombia”. It corresponds to the undergraduate research project (2021) called “The gap between public education and private education with the score obtained in the English area of the ICFES Saber 11 tests in the last 10 years (2010-2020)” under the direction of professor Olga Camila Hernández Morales. The above allowed distinguishing the aspects or elements that make up this division and, at the same time, the generation of opportunities to strengthen bilingual proficiency in the most affected areas.

In relation to the work carried out, different concepts were deepened: differences between educational levels, bilingualism policies and plans, including standardized tests. First, according to López et al. (2017), Martín (2008) and Gómez (2018), the differences in formative grades can be seen as the dissimilarity of academic opportunities in public schools compared to private institutions. On this basis, emphasis is placed on the insufficiency of pedagogical resources, teacher preparation and the shortage of high-tech equipment that impair student progress and quality.

According to Mora et al. (2019), bilingualism plans and policies have denoted the development of inclusive projects for the training of foreign languages, the improvement of skills and the promotion of multilingual patterns in indigenous communities, with the purpose of determining enhancement plans in the face of bilingual development problems. On the other hand, Joya and Cerón (2013) analyzed the importance of cultural and technological interconnection of bilingualism in order to integrate greater competitive and cultural opportunities linked to market progress.

With reference to standardized tests, López et al. (2017) and Rozo (2017) state that bilingualism projects such as “Colombia bilingüe” emphasize the results obtained and plans to optimize the progression of competencies aligned with the Common European Framework of Reference for Languages (CEFR). The above, taking into account socioeconomic situations, family or institutional factors.

Materials and methods

The present study included the factors that generate the gap between public education and private education in relation to the scores of the English area of the Saber 11 tests prepared by the Colombian Institute for the Evaluation of Education (ICFES) in the last ten years. Therefore, it developed a mixed investigation. In accordance with Salas (2019), these investigations create a broader perspective on the object of study, as well as the generation of multiple data and perspectives. The research method was correlational, whereby, in accordance with Creswell (2011), this design provides the analysis and measurement of the variables, in addition to establishing a possible result.

In line with the aforementioned, the behavior of the two variables was considered, both in the quantitative and qualitative stages. The dependent variable was the educational gap. In the quantitative phase, it recognized the independent variables: access to connectivity from home or the institution, along with the following aspects: age, gender, socioeconomic factors, institutional character, and urban or rural location. Regarding the qualitative phase, the independent variable was the score obtained in the English area of the Saber 11 tests. From these, elements related to the analysis of bilingualism plans were also examined, from the review of the literature and the responses to semi-structured interviews.

On the other hand, in view of the fact that this research was mixed; from the quantitative phase, it obtained 1.000.000 data of the established variables and the records of the test results from the databases of Data ICFES and the Ministry of Information Technologies and Communications (MinTIC). In the same way, variables concerning connectivity, gender, geographic location, economic position of the student, average obtained in the test, type of calendar, among others were contemplated.

In addition, the Gradient Boosting Machine (GBM) is a machine learning method that employs regression and classification activities. This model distinguished by its accuracy in predicting large and small data clusters. Based on the executed project, the internal mathematical functions of this application received the standardized test results and quality among public and private schools for the last ten years. In addition, due to the operation of this programming and the regression models, it was possible to categorize the variables, through the decision tree that are formed by phases as by other empowerment procedures, with the aim of obtaining a more accurate result. Similarly, the sampling of this phase was the students belonging to public and private schools, with urban and rural locations in Bogota and Medellin.

As for the qualitative phase, a semi-structured interview was applied, through which multiple perspectives that cooperated with the research problem were recognized. During the interview, it asked stipulated questions concerning the research as spontaneous questions that provided greater depth and understanding of the educational gap. As specified by Flick (1998) semi-structured interviews "have a greater degree of adaptability and interpretability in terms of research establishments compared to standardized interviews" (as cited in Diaz et al., 2013, pp. 162-167).

This interview included questions related to public and private education, the history of education in Colombia, standardized tests, bilingualism plans, among others. In this order of ideas, the population used were English teachers of tenth and eleventh grades of public and private schools in Bogota, Medellin and in the department of Antioquia; seeing that they empower the renovation of the cognitive skills of students in consideration of continuous learning.

It should be noted that the sample was a basic education teacher who teaches English in tenth and eleventh grades in a rural school in Cundinamarca and an English teacher in tenth and eleventh grades of a flexible pedagogical model (virtual) in Antioquia, which serves students in conditions of vulnerability and rurality. The foregoing, with the purpose of distinguishing the strengths and weaknesses of the educational system in these areas and to understand their influence with the preparation, presentation and results in the tests. On the other hand, the type of sampling chosen for this research was intentional or by judgment, since it allows to fix the selection of the sample through the criteria and knowledge of the researchers, in pursuance of obtaining more concrete information.

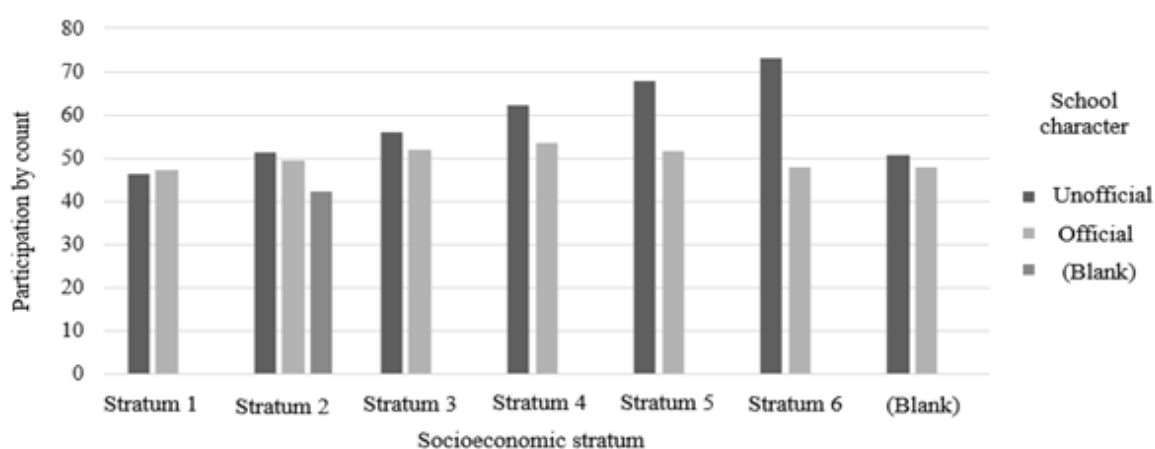
Results and discussion

In conformity with the information obtained from the ICFES and MinTIC data and the semi-structured interviews, it was possible to identify some similarities and differences in the educational gap. One of the characteristic features was the participation and performance of these public and private schools, both in urban and rural sectors. It is important to point out that official institutions tend to manage a greater intervention than non-official ones. However, private schools have achieved better scores during these ten years, thus reaching levels equal to or higher than B+, due to the socioeconomic level, the possibility of acquiring resources, access to internet and institutional, family and personal growth opportunities.

In addition, despite the fact that the participation of students from public schools in strata 1, 2 and 3, has increased in specific periods from 2014 to 2020. It is examined that students from private schools in upper strata 4, 5 and 6 acquire better results in contrast to the lower stratum public institutions. Consequently, they usually stand out with levels between B1, B2 or B2+. Hence, it is possible to examine the existing gaps between public and private training, failures in educational progress and incidences in educational quality (figure 1).

Figure 1

Average by stratum vs. the nature of the schools in Bogota and Medellin in the last ten years (2010-2020)



Note. Cortés & González (2022, p. 57)

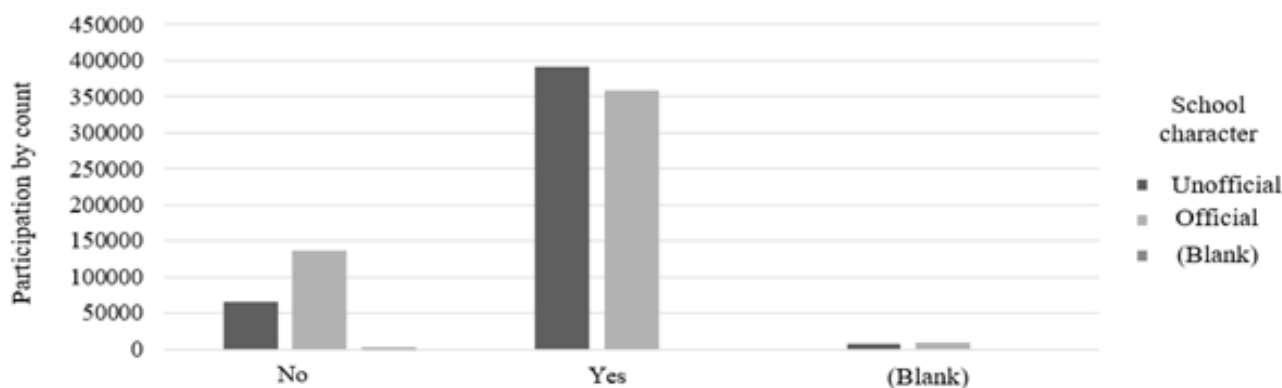
Likewise, the following excerpt from a semi-structured interview conducted shows the contrast between the socioeconomic level of public and private bilingual education:

Well, there are several important things to highlight. The first one is that these schools, also because of their economic level, have access to a quantity of material that does not reach Colombia. For example, the Colombo-Canadian school has access to books that children in Canada really use, be it literature, children's literature, literature for young people. And what we get here is material designed for people who are learning English as a second language. I think that makes a lot of difference (...) As far as books are concerned, the school supplies are whatever you ask for; that is, depending on the teacher's needs, in private schools. While in public schools, it is the same as the budget that could be offered to public institutions. So, that already limits the type of textbooks [Pues, ahí hay varias cosas importantes a resaltar. La primera de ellas es que esos colegios, también por su nivel económico tienen accesibilidad a cantidad de material que a Colombia no llega. Por ejemplo, el Colombo-canadiense tiene acceso a libros que realmente los chicos en Canadá utilizan, sean de literatura, de literatura infantil, de literatura para jóvenes. Eh, y lo que nos llega aquí es material diseñado para personas que están aprendiendo inglés como segunda lengua. Yo pienso que eso sí hace mucho la diferencia. (...) En cuanto a los libros, eh, la dotación de los colegios es lo que tú pidas; o sea, según a necesidad del maestro, en los colegios privados. Mientras que en los colegios públicos es como al presupuesto buenamente pudiera ofrecer a las instituciones públicas. Entonces, eso ya limita mucho el tipo de textos]. (Interview 4, personal communication, May 3, 2022)

In addition, most public and private schools in Bogota and Medellin have access to Internet connection. Nevertheless, there is a small population that may have problems with this resource. As a consequence, it has caused defects in the preparation, even in the presentation of the exam, which can be reflected in Figure 2. In the same way, it can be reflected that during 2020-1 internet access increased in both institutions; differentiating the private ones with scores between 55, on the contrary to the public schools with scores of 50 points (Figure 3).

Figure 2

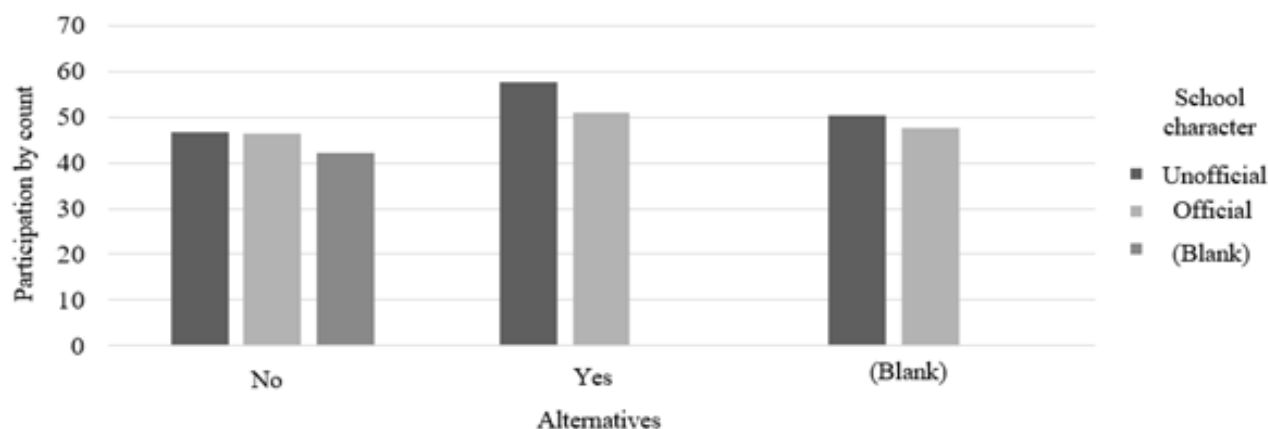
Participation by internet access and nature of schools in Bogota and Medellin for the last ten years (2010-2020)



Note. Cortés & González (2022, p. 55)

Figure 3

Average by period and internet access of schools in Bogota and Medellin in the last ten years (2010-2020)



Note. Cortés & González (2022, p. 55)

Additionally, it should be reported that authors such as Meza (2016) affirm that private institutions have outstanding technology and digital supports, compared to public ones that do not have higher development. This can be observed in the following excerpt from another interview executed:

Then, for example, out of a group of 11th grade that were 30, 35 students, 7, 8 were connected to the virtual class. So, what I had to do, ah, I no longer gave the class to only one 11th grade, but I called the three 11th grades, and 20, 18 were connected. Eh, due to this situation, because there were students who had no connectivity at home, so obviously they could not get to a virtual class. [Entonces, por ejemplo, de un grupo de 11° que eran 30, 35 estudiantes, se conectaban a

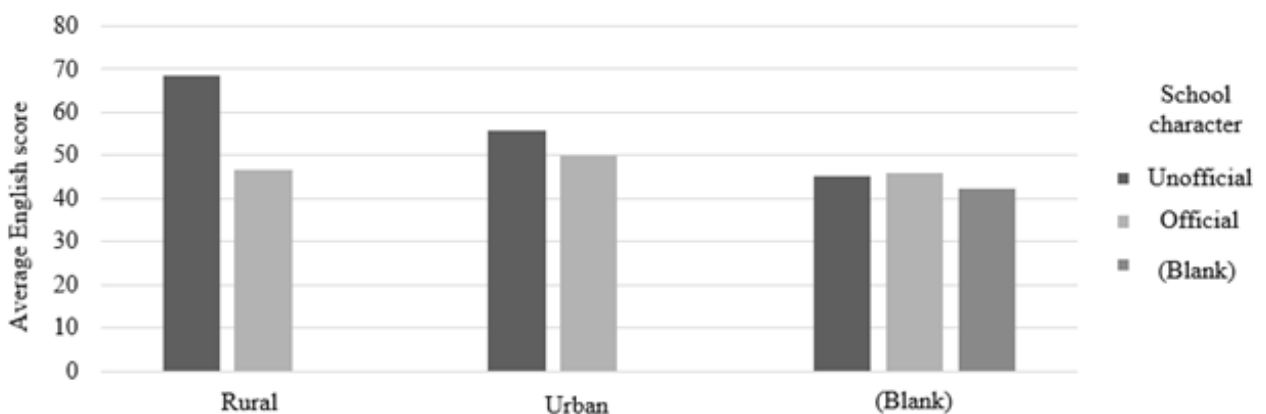
la clase virtual 7, 8. Entonces, qué tocó hacer, ah, yo ya no daba la clase a un solo 11°, sino citaba a los tres 11°, y se conectaban 20, 18. Eh, debido a esta situación, porque había estudiantes que no tenían conectividad en su casa, entonces, obviamente no podían llegar a una clase virtual]. (Interview 4, personal communication, June 1, 2022)

On the other hand, the authors Suso and Fernández (2001) and Scrivener (2005) feature some elements that influence teaching processes: learning, student assessment, cognitive processes at the time of learning English, analysis of the internal and external components of the teacher and the student body (as cited in Díaz et al. 2010, pp. 50-53). In this sense, there are possible limitations or dissimilarities between public and private, urban and rural education.

Based on the statistical analysis performed, it can be detected that urban schools tend to maintain a higher participation than rural institutions. On the other hand, rural private schools attained better results than urban private schools, with scores above 60 points (figure 4)

Figure 4

Average by period, area of location and nature of school (public vs. private) in Bogota and Medellin in the last ten years (2010-2020)



Note. Cortés & González (2022, p. 51)

Although, official rural schools maintained results of 45 points, as opposed to official urban schools, who obtained 50 points. It should also be distinguished the similarity presented by rural private schools and urban public institutions during 2016, 2017, 2018, reaching up to 80 points in the test.

In accordance with the aforementioned, it is possible to make certain oppositions of public and private education in public, and urban sectors; denoting the difficulties, congruences of improvement and action plans in order to achieve better English scores in the tests and a better proficiency in the language, based on the CEFR. As a consequence, these differences between the public and the private can be emphasized in the following fragments:

Completely, completely, the school where I work does not have internet, it does not have internet, so, imagine that in English where the vocabulary, where English is needed to improve it, to practice, there is no internet there, they do not have internet in the school. The sidewalk has internet in some places, so there is no such tool, so what is the tool, I record the videos in Bogota, in the city, take them on a memory stick or on a computer, and show them there. But connectivity does not exist [Completamente, la escuela en la que yo laboro no tiene internet, no tiene internet, entonces, imagínate que en inglés donde el vocabulario, donde se necesita el inglés para mejorarlo, para practicar, allá no hay internet, no tienen internet en la escuela. La vereda tiene internet algunos lugares, entonces no existe esa herramienta, entonces cuál es la herramienta, yo grabar los videos en Bogotá, en la ciudad, llevarlos en una memoria o en un computador, y mostrárselos allá. Pero la conectividad no existe]. (Interview 5, personal communication, May 7, 2022).

For example, in a private school, one has a lot, as a teacher you have many opportunities to train and improve your profile in terms of teaching languages. In the private system, in the public system, suddenly those teachers who manage to link up with government programs or who manage to access courses, but they are mostly for the cities. A teacher who is in a rural place, unless they have a super internet connection, they cannot access many of these trainings, yes? Or they carry them with some regularity, while a teacher with the private school, uff, has them on hand all the time. [Por ejemplo, en un colegio privado, uno tiene muchísimo, como profesor tiene muchísimas oportunidades de capacitarse y de mejorar su perfil en cuanto a su enseñanza de las lenguas. En el sistema privado, en el público, de pronto aquellos docentes que logran vincularse con los programas del Gobierno o que logran acceder a los cursos, pero son más que todo para las ciudades. Un docente que está en un lugar rural a menos que tenga una súper conexión a internet, no puede acceder a muchas de estas capacitaciones, ¿sí? O los llevan con alguna regularidad, mientras que un docente con el colegio privado, uff, las tiene a la mano todo el tiempo]. (Interview 2, personal communication, April 19, 2022)

In addition, it is essential to accentuate that within the gender influence analysis it was perceived that there is a considerable presence of female gender in public and private schools. Likewise, during 2011, 2014, 2015, 2016 and 2017 female participation exceeded 35,000 students. Moreover, through this study it examined that the average results of males and females in private schools are better than in public schools. On the other hand, the average of male and female students from private colleges was close to 75 points in 2016, 2017 and 2018. Despite this, there is no perceived difference between genders in both educational sectors.

In correspondence with standardized tests, Rojas (2018) establishes the relevance of implementing strategies that encourage the advancement of the participation of results in public schools. On the other hand, the author Meza (2016) displays that the male gender usually obtains higher results in areas such as science and mathematics. In this order of ideas, it is crucial to underscore the development of bilingualism policies in order to contribute to continuous learning in the most affected communities; optimize methodologies in classes, and consider new conformities of the female gender in tests, corresponding with access to higher education. Another feature to be

examined is the family and student environment, since during this research it was identified that there are other aspects that influence the results. One of them is the accompaniment of parents in the academic progress of their children, as can be illustrated in the following excerpt:

Well, my school, is a school that normally the characteristic is that they are, uhm, I would believe that 60% are single-parent families, uh, around 30% are families where mom and dad are the only parents. So, uh, one of the one's that one can see a lot of, uh, that I would think causes an effect on the results is that type of family. For example, one of the kids that one can, that have, that live with their parents, that live well, are the ones that get better results in the tests, in general. Because those who live, for example, only with their grandmother or are not very dedicated to study. [Bueno, mi colegio, es un colegio que normalmente la característica es que son, uhm, yo creería que un 60% son familias mono monoparentales, eh, por ahí un 30 % familias donde conformadas por mamá y papá. Entonces, ah, uno de los uno de lo que uno puede ver mucho, eh, que creería uno que causa un efecto en los resultados es ese ese tipo de familias. Por ejemplo, uno de los chicos que uno puede, que tienen, que viven con sus papás, viven bien, son a los que mejores resultados obtienen en las pruebas, por lo general. Porque los que viven, por ejemplo, solo con la abuela o no son muy dedicados al estudio]. (Interview 5, personal communication, June 1, 2022).

In conclusion, from the observation made, coincidences are discerned between the results of the statistical analysis, the semi-structured interviews, the studies of the background of the investigation, and the theories seen. Accordingly, the inequality of public and private bilingual education, the effects on test performance, and the relevance of action plans to optimize language skills and the English level based on the CEFR standards are denoted.

At the same time, the technological and innovative deficiencies in rural areas and the deficiencies of bilingualism strategies in both sectors are evident. As a result, it is fundamental to stimulate spaces for educational enrichment through specialized books, as well as the use of interactive applications that allow the development of bilingual skills in accordance with the guidelines of the Information and Communication Technologies (ICT) and to promote the inclusive and diverse quality of the educational models.

Conclusions

This paper analyzed the differences between public and private education in relation to the scores obtained in the English area of standardized tests in the cities of Bogota and Medellin in the last ten years (2010-2020). Through this analysis, the most influential factors between the two training sectors were described according to the results of the ICFES Saber 11 tests. The preceding, because it formed a deepening of the educational gap based on academic and socioeconomic opportunities that hinder the possibilities of obtaining a good performance in tests and access to higher education.

In a similar manner, this work identified the degree of relationship of connectivity with the results of the Saber 11 English test in the last ten years in Bogota and Medellin. The most relevant aspect of this characterization of the degree of relationship of connectivity with the test results was recognizing the domain of participation and the average of private schools compared to public ones. This contributed to the validation of the

particularities related to school administration, access to didactic study materials, and the management of ICT that affect the achievement of a good score.

In addition, what helped the most in this identification was the analysis of the respondents' answers in the semi-structured interviews, because it favored the collection of reliable qualitative data in correspondence with the experience in the educational sectors and the progress in the adaptation of technological tools. Also, the most difficult part of this identification was inspecting the growth of instructional inequality due to the effects of the Covid-19 pandemic, because not enough information was found regarding educational setbacks in this specific area.

Additionally, this study determined the performance of the Saber 11 English test in the last ten years in rural and urban areas of Bogota and Medellin. By means of this rationale, the fluctuations of the average of the rural private schools were spotlighted in accordance with the public and urban private schools. Thus, it favored the exploration of the students' family aspects, socioeconomic situations, and institutional advances in the rural environment.

On the other hand, this study established the trends of discrepancies between socioeconomic strata in the results of the English test and measured their influence on the improvement of the educational system. Jointly, one of the most significant findings found in this process was the increase in scores the higher the stratum of private institutions. In this respect, it is inferred that students belonging to private schools of higher strata have better results than public schools of lower socioeconomic strata, due to family income, growth opportunities, improved connectivity, and the acquisition of courses or materials for the reinforcement of the second foreign language.

Moreover, based on the literature review and the interviews conducted, several strategies were identified that could contribute to the reduction of this educational gap between the public and private sectors. Equally, it would promote a better bilingual education in the country. One of these methodologies is to increase the hourly intensity of English classes, as well as to set up spaces such as classrooms with sentences, phrases and words in English. Besides, the implementation of books, spaces, and even technological and innovative resources aligned with ICT policies would boost bilingual progress in the most vulnerable areas.

Finally, this study considered whether the optimization of socioeconomic and institutional factors will contribute to the improvement of the results obtained in the area of English in the standardized tests and the strengthening of the educational system of public and rural institutions in the cities of Bogota and Medellin. Similarly, the most important aspect of this circumspection was to point out the actions that have been carried out in the institutions under the guidelines of the bilingualism plan and the support of ICT, since they assist in the measurement and improvement of the competencies focused on the linguistic standards evaluated in the tests and correlated with the CEFR.

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