

Impact of School Canteens on School Retention and Academic Performance in the Atlantic Department (Benin)

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Abstract

In Benin, obstacles to universal access to primary education persist. In rural areas, enrolment and attendance rates remain low due to several factors. Families living in poverty may not be able to afford to send their children to school; although the government has eliminated primary school fees, parents still have to buy school uniforms and supplies. There is also an opportunity cost associated with sending girls to school, rather than keeping them at home where they can help their mothers with household chores and look after their younger siblings (School canteens in Benin to improve student enrolment and retention in partnership with parents' associations, 2008). Prior to 2016, the school feeding system was in its infancy, with canteens operated for only three months of the year. However, thanks to determined government reforms, the school canteen system has undergone a profound transformation. The implementation of a USD 79 million has not only not only increased coverage from coverage from 30% to 75% today, but also set the ambitious target ambitious goal of achieving 100% coverage by the end of 2023 [1]. The aim of this study is to assess the impact of canteens on school retention and children's academic performance. We conducted a descriptive and analytical diagnostic survey using a questionnaire designed for parents of schoolchildren. Canteens increase and maintain the number of children in our schools, especially when the providers start their activities, in this case those traveling long distances. Almost all the parents surveyed believe that the school canteen has had an impact on their children's motivation to attend school and class, and consequently on their performance. For example, for all parents surveyed, the school canteen has reduced the risk of children dropping out of school, especially girls (97%), although the difference with boys (95%) remains small and is not statistically significant. What's more, since the advent of the PNASI, in the Atlantic

department, the CEP pass rate in schools with canteens far exceeds that of schools without canteens. This shows that canteens play a major and positive role in the retention and success of the schoolchildren who benefit from them.

Keywords

School Canteens, Impact, Atlantic, Pnasi, Benin

1. Introduction

The right to basic education is recognized for every child in the world, without discrimination of any kind (Universal Declaration of Human Rights, 1789). Benin follows the same straight line. According to Article 13 of Title II of the Beninese constitution of December 11, 1990, “the State provides for the education of young people through public schools. Primary education is compulsory. The State shall progressively ensure free public education” [2]. The focus of this article on the Beninese constitution on educational issues is an illustration of the importance and strategic positioning of schooling in the socio-economic development process.

Canteens play an essential role in Benin’s education system, providing nutritious meals to schoolchildren to promote their well-being and academic success [3]. School feeding has evolved over time, and is now clearly recognized and accepted as one of the most effective ways of supporting children’s enrolment and retention in school. Indeed, in many parts of Benin, where children walk on average more than three kilometers from their villages to school, and where school attendance is hampered by the need for food and domestic chores (especially for girls), there can be no school without a canteen.

School canteens are expanding rapidly, particularly in food-insecure and vulnerable areas, in order to boost enrolment, retention and performance [4].

The present study has led us to ask the following questions: What impact do canteens have on keeping schoolchildren in school? Does the school canteen program affect pupils’ academic results? This study attempts to provide some answers to these questions.

1.1. Study Setting

Our survey was carried out in selected villages in the Atlantic department.

1.2. Type and Duration of Study

We carried out a two-day pre-survey in the Atlantic department to test the data collection tools, draw lessons that enabled us to finalize the data collection sheets and finalize the survey implementation strategy. This is a descriptive and analytical survey with a diagnostic aim, using a questionnaire designed for the parents of the schoolchildren surveyed.

1.3. Ethical Considerations

The survey was carried out only after consent had been obtained in the preamble to the survey form. The confidentiality of the data was guaranteed, and the identity of the child and the household was not revealed. The consent of the mothers of the children surveyed was obtained and respected before the questionnaire was administered. The confidentiality of the information gathered was guaranteed. Dignity and freedom were respected.

1.4. Data Collection

Questionnaires were in French, but were mostly administered in local languages. The data collection team had a good understanding of the French version of the questionnaires, as well as a good command of the local languages. However, it is possible that errors may have been made when translating the questionnaires into local languages.

1.5. Questionnaires

We formulated a series of questions for the principals and principals of the schools we visited, on the functioning of the canteens, and also for the parents of pupils within the school, whose answers we will use to determine the impact of the canteens on children's attendance and school results. This research is both quantitative and qualitative in nature, because it enables us to identify the factors influencing student performance, and to analyze the opinion data or conception and quantitative data collected from our respondents. Consequently, it required a literature review, the development of a questionnaire and an interview guide on which the survey was based to gather information on the subject from the target population.

2. Materials

To carry out this research, data were collected using the following tools:

- Notepad
- Survey sheet

2.1. Methods and Data Processing

This technique was chosen to meet the quantitative requirements of our study. It is a technique for collecting written responses. In the context of our research, a questionnaire was drawn up and sent to teachers in schools with canteens. The questionnaire includes an identification section that seeks to provide information on the status of the respondents. The other sections of the questionnaire correspond to the specific objectives of the research, and include open, closed and mixed questions. The questionnaire covers three main themes, namely knowledge of the school canteen program, school performance and the link between school canteen and school performance.

Once the data have been collected, they are processed. This phase involved

processing the questionnaires into a database, and entering and analyzing the results. The information gathered was translated into tables and figures to facilitate analysis, using Microsoft Word and Excel 2013. In addition, the data collected was processed by transcribing the interviewees' speeches. Transcription was based on the questions contained in the interview guide.

2.2. Data Analysis

Data were entered into Excel and Word as the study progressed. The data were analyzed using Excel 2010, Microsoft Word and Statistical Package for Social Sciences (SPSS) version 16.0. The threshold of statistical significance was set at $p < 0.050$. Results were presented in the form of tables, histograms and graphs using Excel 2010 and SPSS 16.0.

3. Results

3.1. Schoolchildren's Behaviour in the Classroom before the Canteen

The figure below provides us with information on the behavior of schoolchildren in class before the canteen.

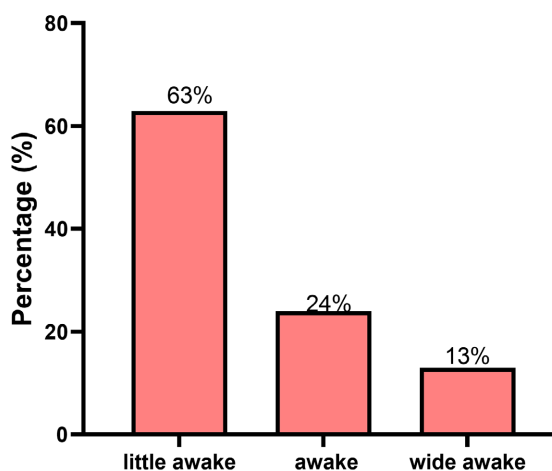


Figure 1. Schoolchildren's behaviour in the classroom before the canteen.

Figure 1 shows that before the canteens, 63% of children are not very awake, 24% are wide awake and 13% are very awake. This question only concerned principals who witnessed the arrival of canteens in their schools.

3.2. Schoolchildren's Behavior in the Classroom after Lunch

The figure below provides us with information on the schoolchildren's behaviour in the classroom after lunch.

According to **Figure 2**, surveys confirm that since the introduction of canteens in the schools surveyed in the Atlantic department, 10% of children are not very wide awake, 21% are wide awake and 69% are very wide awake.

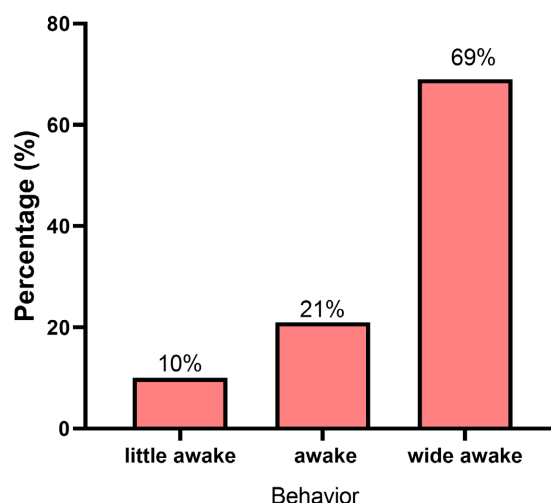


Figure 2. Schoolchildren's behaviour in the classroom after lunch.

3.3. School Attendance Rate

The figure below provides us with information on an improving school attendance rate.

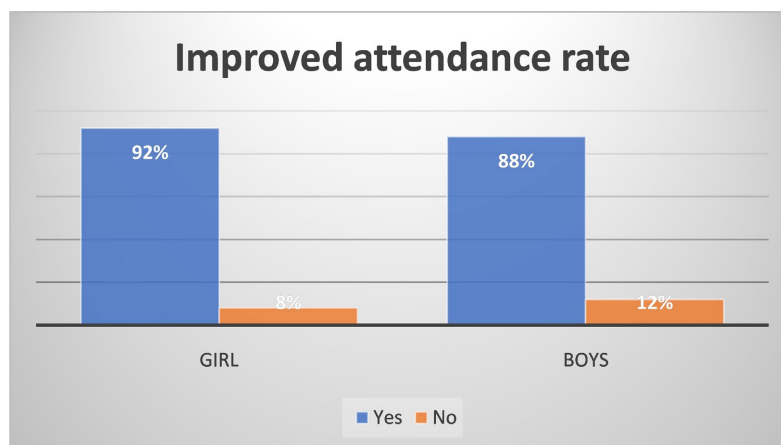


Figure 3. Improving school attendance rates.

Figure 3 shows the case of the attendance rate, where the majority of the units considered believe that the school canteen improves the attendance rate of girls (92%) more than boys (88%).

The first advantage is the fact that parents are relieved and gain time for their own occupations. Then there's the fact that canteens help parents to feed their children, and in so doing, parents save money. [5] But there are other advantages too: thanks to the school canteen, children eat well-balanced meals to the satisfaction of their parents, who manage them better during the day and improve their performance. In some canteens where food is provided, the canteen enables some parents to save on food. School managers commented positively on the impact of the school canteen on student enrolment, retention, attendance, performance and

academic achievement, while parents emphasized the reduced risk of dropping out of school, the child's motivation to attend school/class and the child's performance. Overall, school canteens have a positive impact on pupils, with the proportion of favorable opinions ranging from 88% to 97% for boys [6].

Canteens increase and maintain the number of children in our schools, especially when the providers start their activities, in this case, those traveling long distances. Almost all the parents surveyed believe that the school canteen has had an impact on their children's motivation to attend school and class, and consequently on their performance. For example, for all parents surveyed, the school canteen has reduced the risk of children dropping out of school, especially girls (97%), although the difference with boys (95%) remains small and is not statistically significant.

These results are not far removed from those obtained in the report on the iterative monitoring of canteen operations in Benin carried out by Félicien *et al.* in 2018, which confirm that whatever the type of canteen considered and the staff surveyed, the fact that school canteens present advantages for parents remains self-evident [4] [6]. Almost all canteen masters (93%) and the majority of directors (78%) stated that the school canteen has benefits for the parents of their pupils. (Félicien *et al.*, 2018).

However, according to the findings of Diagne *et al.* (2008) and Powell, Walker, Chang [7], and Grantham-McGregor (1998), school canteens have a greater effect on the performance and retention of younger children than older ones. [8]

3.4. Satisfaction with School Canteens

The figure below provides us with information on the level of satisfaction with the existence of canteens.

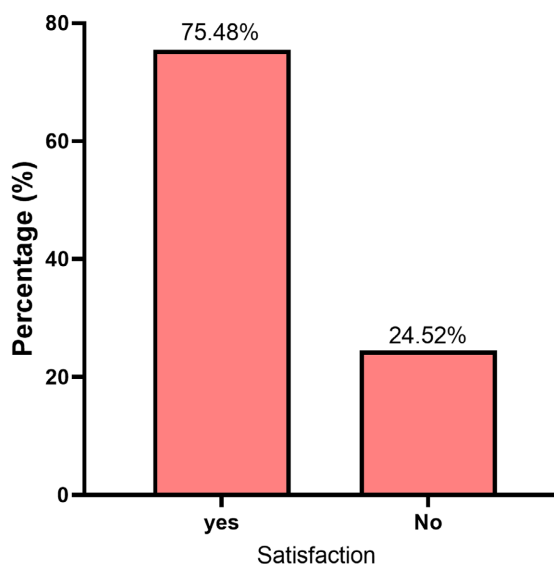


Figure 4. Level of satisfaction with the existence of canteens.

Figure 4 shows that 75.48% of the surveyed population are satisfied with the existence of school canteens, while 24.52% are not satisfied. Parents dissatisfied

parents think that canteens should provide 100% of the children's meals. According to them, all the food has been sent to us by international organizations, so they won't have to pay for anything nothing to pay.

3.5. Link between Learners' Performance and the Presence of a School Canteen

The figure below provides us with information on the link between learner performance and the presence of a school canteen.

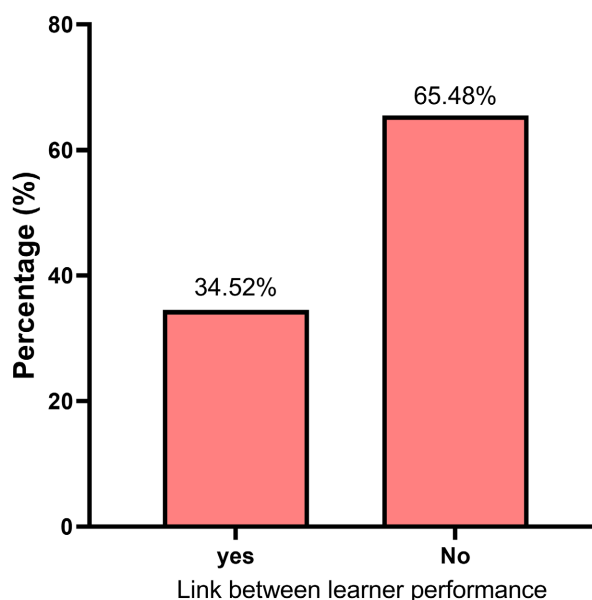


Figure 5. Link between learner performance and the presence of a school canteen.

Figure 5 shows that 34.52% of respondents believe there is a link between student performance and the presence of a school canteen, compared with 65.48% who think the opposite. When asked whether there is a link between performance and the existence of a canteen, respondents categorically refused. The future of children necessarily depends on the knowledge and notions they have acquired in school. There is a discrepancy between the skills a pupil has acquired and what he or she is able to produce, for example in an exam situation or when the teacher (or parent) asks him or her to recite what he or she has learned.

As performance is not a question of what the student can produce, but of what he knows how to do and is capable of doing at any time and in any place, several factors such as canteens could have an effect on this element at student level, but this figure points out that there is no link between the presence of a canteen and student performance.

3.6. Effect of Canteen Meals on Children

The figure below provides us with information on an effect of canteen meals on children.

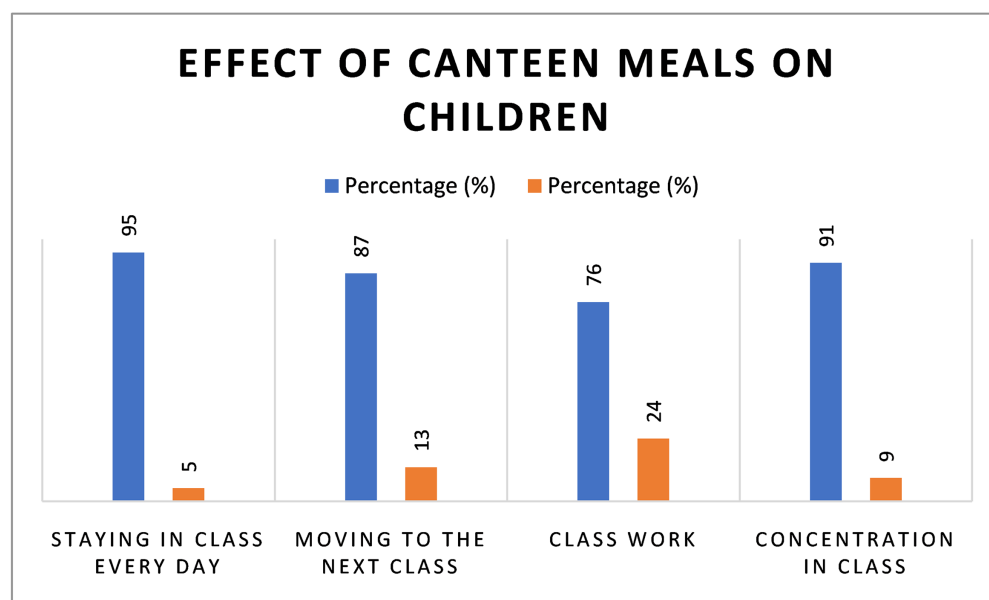


Figure 6. Effect of canteen meals on children.

Figure 6 shows that when it comes to keeping schoolchildren in class, 95% respond favorably, 87% manage to go on to the next class, 76% work well in class and 91% of schoolchildren are awake.

Overall, the canteens, which operate every 5 days of the week without interruption, are increasing and maintaining the number of children in school. School canteens therefore play a part in improving the physical and mental well-being of schoolchildren, and thus their ability to learn.

In fact, the provision of food in schools acts on two levels: on the one hand, pupils' nutrition and health are improved; on the other, canteens make a major contribution to keeping pupils, especially young girls, in the classroom. Canteens therefore make a major contribution to improving academic performance and reducing school drop-out rates.

Canteens improve children's performance, especially girls', according to school principals. Canteens lighten the burden on parents, according to the actors surveyed, and offer children balanced meals.

As for the parents, they have an excellent appreciation of all the services and feel that the school canteen is very well managed by the school staff (director and canteen master) or the management committee. The school canteens operate every 5 days of the week without interruption and offer children sufficiently balanced meals: vegetables, protein (fish, cheese or egg).

More than eight (8) pupils out of ten (10) always enjoy the meals they eat at the canteen. In fact, all the students surveyed stated that their meals were always eaten in a calm atmosphere, fairly hot, and in plenty of time. What's more, almost all the students felt that canteen meals were always good. By gender, just as many boys as girls say that canteen meals are always eaten in good time. When it comes to the quality and condition (hot) of the meals served, schoolchildren

were positive.

Whatever type of canteen is considered, and whatever the staff surveyed, the fact that school canteens offer advantages for parents remains self-evident. Almost all canteen masters and the majority of principals stated that the school canteen has benefits for the parents of their pupils. School managers were positive about the impact of the school canteen on student enrolment, retention, attendance, performance and academic achievement.

3.7. Evolution of Canteens in the Atlantic Department

Figure 7 below provides us with information on an evolution of canteens in the Atlantic department.

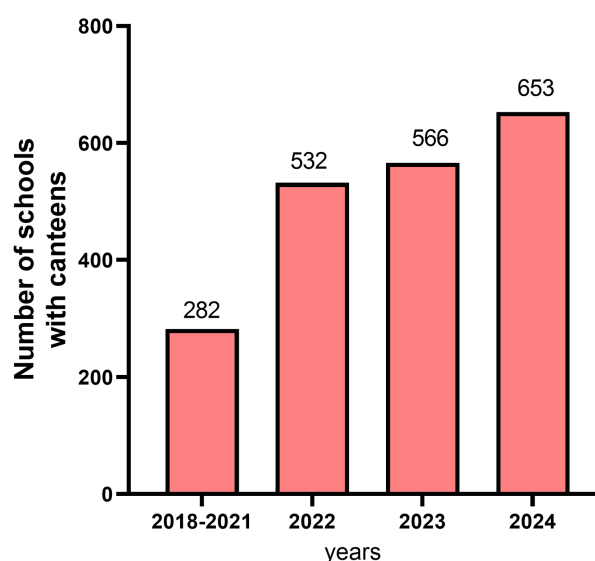


Figure 7. Evolution of canteens in the Atlantic department.

The PNASI, which became truly functional in 2018, has evolved in the Atlantic department and is having a very positive effect in keeping children in school. (**Figure 7**). The Atlantic Department has a total of 792 schools, 653 of which have school canteens, representing a coverage rate of 82.45%.

3.8. Number of Schoolchildren Fed by School Canteens in the Atlantic Department

Figure 8 below provides us with information on the number of schoolchildren fed by canteens.

This figure shows a significant gradual evolution of school canteens in the Atlantic department, from 62,285 pupils fed, including 28,133 girls and 34,152 boys, to 141,883 pupils fed, including 65,790 girls and 76,093 boys.

All schools in the Zè and So Ava communes are already 100% covered by school canteens. At the start of the new school year, the communes of Toffo, Allada and Kpomassè will also be 100% covered. Torri, Ouidah and Calavi will remain.

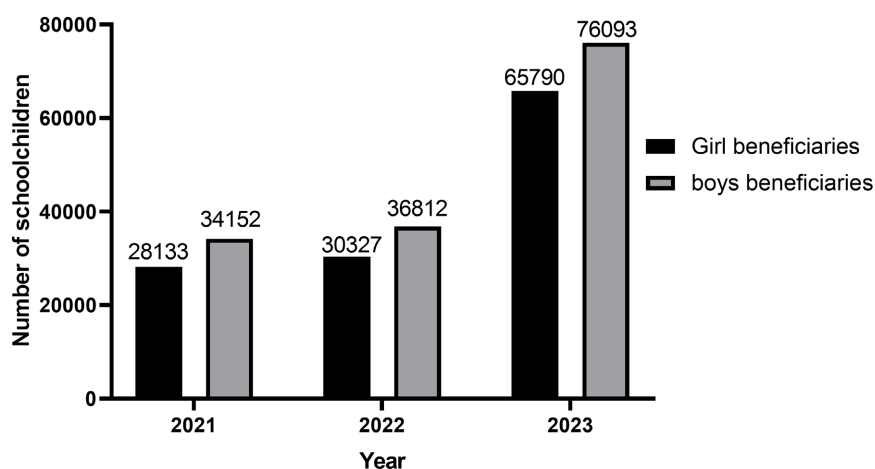


Figure 8. School canteen beneficiaries.

3.9. Effects of School Canteens on Schoolchildren's Results in the Atlantic Department's School Canteens

Figure 9 below provides us with information on an effects of school canteens on schoolchildren's results.

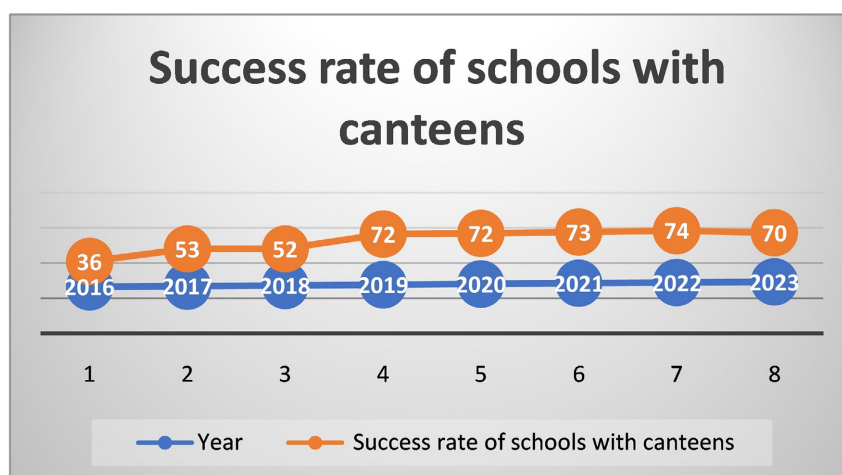


Figure 9. Trends in school results in canteen schools.

This curve shows that since the advent of the PNASI, in the Atlantic department, the CEP pass rate in schools with canteens has far exceeded that of schools without canteens. This shows that canteens play a major and positive role in the retention and success of the schoolchildren who benefit from them.

4. Conclusions

In summary, Benin's journey in improving school feeding programs is a remarkable example of transformation. Before 2016, the school feeding system was in its infancy, with canteens operating only three months a year. However, thanks to determined government reforms, the school canteen system has undergone a

profound transformation. The implementation of a USD 79 million financing program not only increased coverage from 30% to 75% today, but also set the ambitious goal of achieving 100% coverage by the end of 2023 [1].

From its genesis, the school canteen was set up to encourage student attendance and help improve retention levels in schools, particularly in rural areas. School canteens ease the economic burden on parents, giving them time to pursue other activities rather than looking after their children's lunches. The nutrient content of the meals eaten ensures that children are well-equipped to attend classes, especially in the afternoon [6].

Its impact on retention and enrolment rates has been demonstrated by principals and teachers of schools with school canteens. However, the operation of school canteens in schools is not without its difficulties. However, one school, one canteen will provide a sustainable, inclusive and quality education for all, by 2025 [9].

The major difficulty with school canteens is that some parents do not pay the required subscriptions. These subscriptions vary according to the needs of the localities in which each school is located. There are also other schools that do not yet have drinking water.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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