



# ALL-ATLANTIC OCEAN RESEARCH ALLIANCE

Creating an Atlantic Ocean Community by Implementing  
the Galway and Belém Statements

## AA-BSN Report: Evaluation



**BUILDING AN ALL ATLANTIC  
OCEAN COMMUNITY**  
Implementing the Belém Statement



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Creating an Atlantic Ocean Community by Implementing the Galway and Belém Statements



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## JOINT PILOT ACTIONS

### ALL-ATLANTIC JOINT PILOT ACTIONS

Following a year-long collaborative process among more than 70 stakeholders at the Atlantic level, the All-Atlantic Ocean Research Alliance Multi-Stakeholder Platform, divided into 5 sub-multi-stakeholders platforms, identified more than 1000 initiatives towards strengthening marine research and innovation collaboration at the Atlantic level, 56 gaps and 79 needs/recommendations to achieve the All-Atlantic Ocean Research Alliance ambition, guided by a total of 20 Strategic Objectives, 20 Operational Objectives, and 10 Key Performance Indicators.

Based on these findings and on the idea of collaboration, alignment, and use of existing resources, they have developed six ambitious and long-term collaborative Joint Pilot Actions:

- [All-Atlantic Training Platform \(AA-TP\)](#)
- [All-Atlantic Aquaculture Technology and Innovation Platform \(AA-ATiP\)](#)
- [All-Atlantic Marine Biotechnology Initiative \(AA-BIOTECMAR\)](#)
- [All-Atlantic Data Enterprise 2030 \(AA-DATA2030\)](#)
- [All-Atlantic Blue Schools Network \(AA-BSN\)](#)
- [All-Atlantic Marine Research Infrastructure Network \(AA-MARINET\)](#)

This report is developed by the **All-Atlantic Blue Schools Network (AA-BSN)** Joint Pilot Action, that aims to connect schools from the Atlantic countries to rise and promote Ocean Literacy and society awareness, with no geographical, cultural, social, or language boundaries. The All-Atlantic Blue Schools Network is promoting a bottom-up process where each school builds its own project based on its socio-cultural-economic reality. Linking all schools together will enhance knowledge exchange and create synergies.

This report is a deliverable in scope of All-Atlantic Blue Schools Network (AA-BSN) Task 7 - Evaluation that aimed at report instruments and results available in the different Belém Statement languages (Portuguese, Spanish, English) and open for access in the All-Atlantic Blue School digital interface.





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## SUMMARY

### 1. Summary

The final task of the AA-BSN has the role of evaluation of the AA-BSN implementation and the impact by national coordinators, teachers, students and stakeholders. This evaluation will be continuously carried out over different years as the impact is also dependent on the engagement and the time of the national blue school implementation. This Task will also allow the production of scientific results on ocean literacy and ocean awareness in a near future.







## 2. Report

We developed the instruments of evaluation, widely discussed by the National Coordinators during the AA-BSN Annual Meeting 2022 in order to accommodate the regional and national perspectives in the surveys. The instruments were translated to different languages and we started the application process with the support of the National Coordinators.

We developed questionnaires focusing on national coordinators, teachers, students and stakeholders. Questionnaires and database are large documents. In this report, we are providing the link for the online survey model in English and the raw dataset (unpublished data: [https://docs.google.com/spreadsheets/d/1PRGSzVw6cBvmXWhbpCscE0vURlryWYzB/edit?usp=share\\_link&ouid=116722398071858722010&rtpof=true&sd=true](https://docs.google.com/spreadsheets/d/1PRGSzVw6cBvmXWhbpCscE0vURlryWYzB/edit?usp=share_link&ouid=116722398071858722010&rtpof=true&sd=true)).

We have received 280 answers to the evaluation questionnaire by national coordinators, teachers and stakeholders until January 2023. The application of questionnaires for students have not started due ethical procedures. The legislation for such application and ethical committees varies among countries and some do not accept an ethical approval from other country. While some countries have already the authorization, for other we still need a proper in-country evaluation.

**Table 1: Links for English online survey example of the evaluation instrument and the raw dataset.**

Target Audience	Link
National Coordinators	<a href="https://forms.gle/3wqpdTeaMb71m7Tr9">https://forms.gle/3wqpdTeaMb71m7Tr9</a>
Stakeholders	<a href="https://forms.gle/aSTv3UMQsJvNWR8x8">https://forms.gle/aSTv3UMQsJvNWR8x8</a>
Students	<a href="https://forms.gle/f7Jyn1dh7JoNvpuy9">https://forms.gle/f7Jyn1dh7JoNvpuy9</a>
Teachers	<a href="https://forms.gle/hBS7gV67iSmngvZm7">https://forms.gle/hBS7gV67iSmngvZm7</a>

Data will be continuously reviewed from time to time and also the efforts of the national coordinators to increase participation. In session 3, we present the main results until January 2023.



### 3. Main findings

We received 280 answers to the evaluation questionnaire by national coordinators (16), teachers (224) and stakeholders (41) until January 2023. This report will present the main outputs considering the impact of the AA-BSN for each group. Based on overall evaluation, the 5 main results were:

- AA-BSN reached out schools from coastal areas and inland and children from 5-20 years
- Activities involved a range of school's disciplines and the topics with more worked by schools were related to biodiversity, climate, and human-ocean connection
- 80% considered that the Blue School had very and extreme influence in changes in attitudes, behaviors and knowledge of students and teachers towards the ocean, while 96% of the teachers indicated that they increased their personal knowledge on the ocean
- Funding and human resources dedication for the activities were among the top 3 challenges faced by teachers, national coordinators and stakeholders
- National coordinators indicated that teacher training is the most relevant action needed at this stage and stakeholders top 3 contributions had been providing lectures, visits to the institution and offer experiential learning

#### ***Main results by Teachers evaluation***

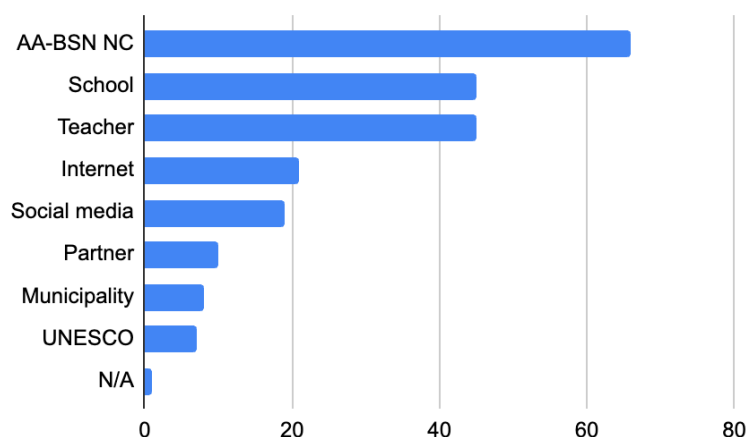
By January 2023, there were 224 teachers that answered the survey. They represent 10 countries, working on schools located either in coastal (173) and rural areas (51), with students ranging from 5-20 years old, mostly with support from the school management/coordination (Table 1).

Most of the respondents found out about the All-Atlantic Blue School Program by some action done by the AA-BSN (Task 3, 4, 6), though indication by another school or teacher had a great weight concerning Blue School adhesion (Figure 1).



**Table 1.** Distribution in number of teachers and location of school by country of respondents.

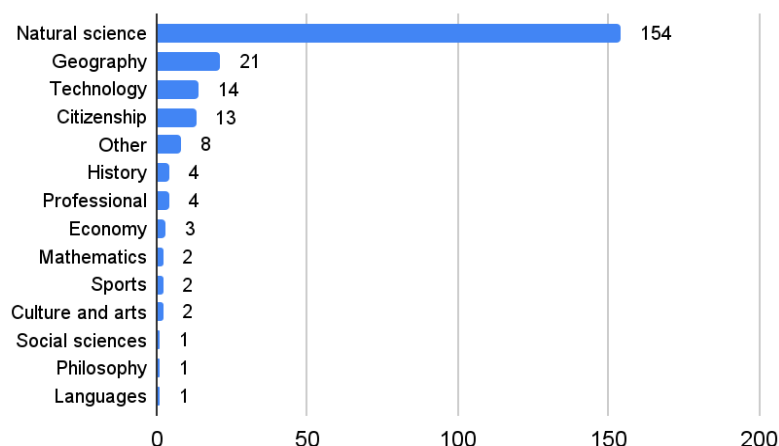
Country	#teachers	# coastal schools	# inland school	Support from school (%)
USA	3	3	0	66
Namibia	4	2	2	75
Argentina	60	33	27	93
Angola	4	4	0	100
Mexico	1	1	0	0
Brazil	25	13	12	88
Sao Tome and Principe	2	2	0	100
Portugal	113	106	7	96
Morocco	1	1	0	0
Nigeria	11	8	3	100
Total	224	173	51	93



**Figure 1.** Number of answers when Blue School teachers were asked how they found out about the Blue School Program.

These teachers have worked on Ocean Literacy in a variety of disciplines, from traditional ones such as Natural Science and Geography, to Economics, Arts and Social Science (Figure 2), often exploring principles of Ocean Literacy related to biodiversity, climate, and human-ocean connection (Table 2). Moreover, under their perception, 80% considered that the Blue School project had very and extreme influence in changes in attitudes, behaviors and knowledge towards the ocean, of students and other teachers (Table 3), with 96% of the teachers believing that the Blue School project increased their personal knowledge of the ocean.





**Figure 2.** Number of mentions of curriculum subjects in which tBlue School teachers have worked on Ocean Literacy.

**Table 2.** Frequency of topics related to Ocean Literacy Principles explored by Blue School teachers.

	Never (%)	Rarely (%)	Sometimes (%)	Often (%)	Always (%)	I don't know (%)
The ocean as a source of artistic inspiration or culture as a communication engine of the ocean	10,3	13,8	<b>33,0</b>	31,3	10,3	1,3
Ocean sustainability	2,2	2,2	16,1	<b>41,5</b>	37,1	0,9
Economy of the ocean	6,3	12,5	<b>37,1</b>	27,2	15,6	1,3
Gender equality at the ocean	23,7	<b>29,0</b>	25,0	9,8	8,0	4,5
The ocean in History	7,6	21,4	<b>35,7</b>	21,0	12,1	2,2
Explore the ocean using geography subjects and tools	7,6	22,3	25,0	26,3	17,0	1,8
The ocean is largely unexplored	4,5	11,6	25,0	<b>33,5</b>	22,3	3,1
The ocean makes the Earth habitable	1,8	7,1	18,8	<b>37,9</b>	31,7	2,7
The ocean supports a great diversity of life and ecosystems	0,4	4,5	12,1	35,7	<b>42,9</b>	4,5
The ocean and humans are inextricably interconnected	0,9	6,3	14,3	35,7	<b>38,8</b>	4,0
The ocean and life in the ocean shape the features of the Earth	2,7	6,3	19,2	<b>36,2</b>	33,0	2,7
The ocean is a major influence on weather and climate	3,6	4,9	20,1	32,1	<b>37,1</b>	2,2
The Earth has one big ocean with many features	4,9	8,9	22,8	<b>32,1</b>	27,7	3,6



**Table 3.** Excerpt from the percentage of teachers' answers when asked about their perception if the Blue School influenced the attitudinal change and knowledge of students and teachers in the items listed.

	Very influential (%)		Extremely influential (%)	
	Students	Teachers	Students	Teachers
Greater interest and concern about problems related to the ocean	54,0	54,0	33,0	30,4
Greater empathy for the ocean	56,7	53,1	32,6	32,1
Learning information essential to behavior change	55,4	54,5	32,6	29,0
Awareness that we are all part of the problem and/or solution of issues related to the ocean	50,4	53,6	38,4	34,4
More reflection on our behaviors and their consequences for the sustainability of the ocean	50,0	54,9	37,1	30,8
A greater understanding of the impact our actions have on the ocean	53,1	54,9	34,4	32,6
Changing our daily choices to contribute to the protection of the ocean	53,1	53,1	30,4	30,8
Changing habits	44,6	46,9	29,9	29,9
Greater willingness and interest in communicating and debating about problems or solutions that we may have for the ocean in circles of friends or with family members	46,4	46,0	22,8	28,1
Interest in sharing knowledge with others	46,9	50,4	28,1	26,8
Willingness and interest in debating issues related to the ocean at a group or community level	46,4	46,9	19,6	26,8
Mobilization of participants in community awareness initiatives	46,4	46,0	20,1	25,4
Participation in citizenship actions and finding applicable solutions for solving real problems	42,4	46,0	25,0	27,2
Learning on matters related to the ocean	50,4	48,7	31,7	33,0
Provide relevant information	54,0	47,8	26,3	31,3
Mean %	50,0	50,5	29,5	29,9

When teachers were asked about challenges during Blue School implementation, the first barrier they faced was the lack of funds to develop activities, followed by the difficulty of involving other teachers to engage in the school project and lack of time to dedicate themselves to it (Table 4). Though, all teachers consider the Blue School project relevant to their school in the future and would recommend it to other teachers and schools.



**Table 4.** Barriers to implement Blue Schools projects from the teacher's point of view.

Barrier to implement Blue Schools	# answers
Lack of funds for the implementation of actions or transport.	132
Difficulty in involving colleagues in the program/project.	97
Lack of time to develop the project.	69
Physical distance to the ocean.	41
Lack of lead time for the programme (ie: we plan our activities a year in advance).	14
Lack of curricular flexibility (which allows articulating initiatives with curricular programs).	12
Lack of support from decision-making stakeholders – Ministry of Education or similar.	6
N/A	6
None	2
Lack of support from school management.	2
Lack of support from the Blue School coordination.	2
Lack of interest on the part of students in studying and exploring the ocean theme.	1
Lack of confidence and training to teach about the ocean.	1
Lack of interest in working on the ocean theme.	1
The permission for the image sample in photos and videos was a present and frustrating obstacle to me as a coordinator	1
Connectivity problems	1
A barriers to implement the Blue School program at the Hospital-domiciliary School is the health status of our students	1
Dense curricular contents	1

### ***Main results by National Coordinators evaluation***

At the moment, there are 16 countries engaged in the AA-BSN and half National Coordinators are affiliated to Universities and Research institutions (50%). When they were asked to select what activities among school engagement and monitoring, build partnerships, and communication they are engaged within the National Blue School implementation, although some countries have more people in their working team, it is clear that the own National Coordinator accumulated attributions (Table 5). The situation is even critical

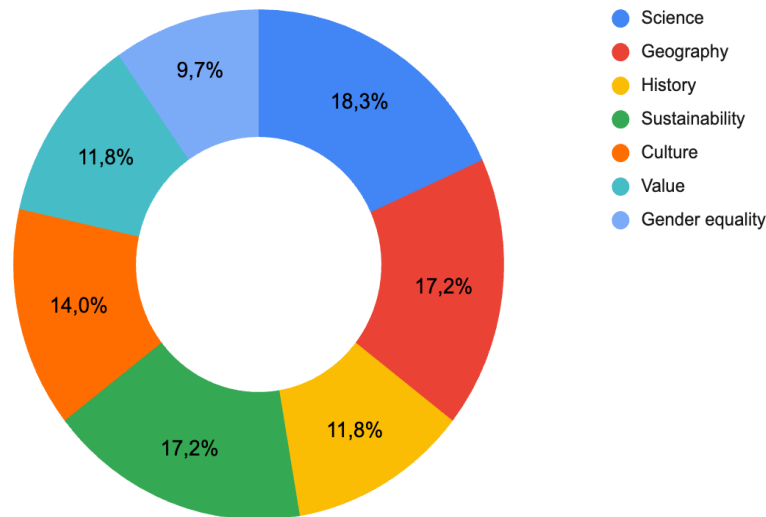


when it is considered that their National Blue School Program implementation is not their only attribution, and most of their dedicated hours to it is an in-kind contribution.

**Table 5.** AA-BSN National Coordinators attribution related to their National Blue School program implementation.

Country	Institution	Position at the institution	# people	School engagement	School monitoring	Partnership	Communication
USA	School	Professor	1	x	x	x	X
Cabo Verde	University	Director	2	x	x	x	X
Ireland	Private company	Director of Education	1	x	x	x	X
Namibia	NGO	Executive Director	?				
Argentina	Governmental	Specialist at the Education Team	5	x	x	x	X
South Africa	Governmental	Science Engagement Officer	5	x			X
Angola	University	Coordinator for scientific area	6	x	x	x	X
UK	University	Post doctoral research officer	1	x		x	
Mexico	University	Researcher	3				
Brazil	University	Project manager	3	x	x		X
São Tomé and Príncipe	NGO	President	1	x	x		X
Portugal	Governmental	Blue School Coordinator	3	x	x	x	X
Morocco	University	Professor	2	x	x	x	X
Nigeria	Research institute	Research/Principal Research Officer	2	x	x	x	X

Ocean Literacy can be described with a more holistic approach through multi-perspectives. And when NC were asked if their National Blue Schools fit into any of the perspectives besides its seven principles, we could see a balance among the answers (Figure 3). Yet, gender equality is slightly out, and may be an indication that the program should address it with more care.



**Figure 3.** Percentage of the AA-BSN NC answers related to different perspectives of Ocean Literacy.

AA-BSN National Coordinators, as Blue School Teachers, were asked about the difficulties they faced during the program implementation, coincidentally, the first barrier cited is the lack of funds to develop activities, followed by their lack of time to dedicate themselves to it (Table 6). However, all National Coordinator consider their National Blue School program relevant in the future.

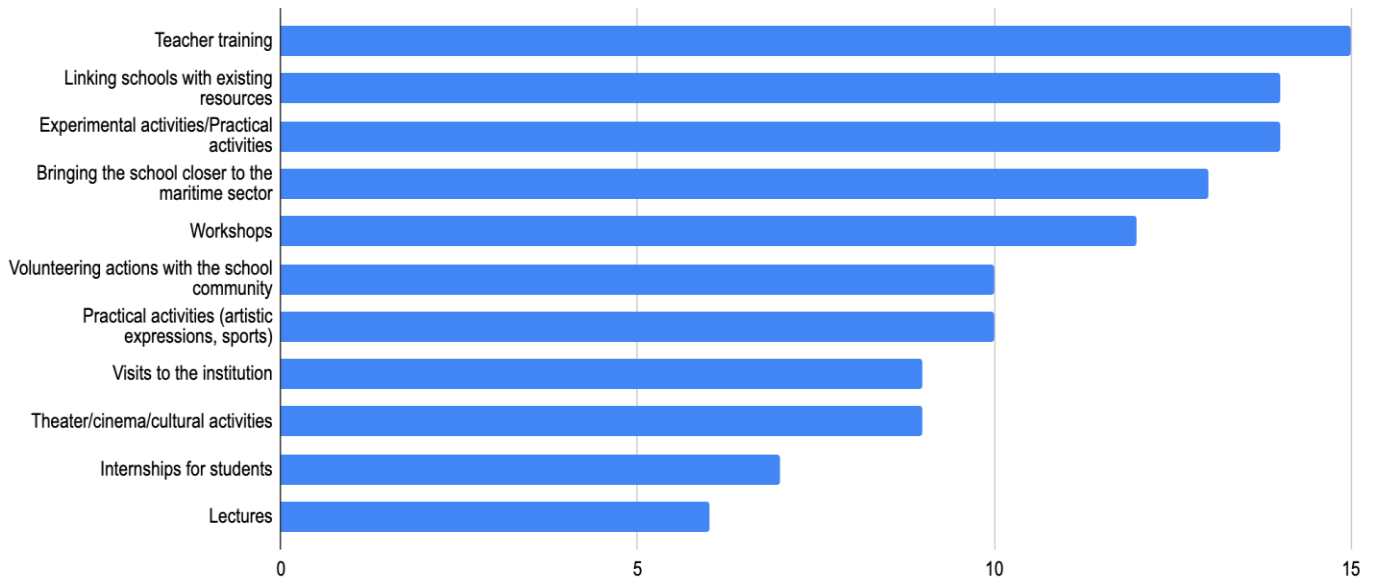
**Table 6.** Barriers to implement Blue Schools projects from the AA-BSN National Coordinators' point of view.

Barrier to implement National Blue Schools	# answers
Lack of funds for the implementation of actions or transport	7
Lack of time to develop the project	7
Difficulty in involving schools in the program/project	6
Lack of support from school management	6
Lack of support from decision-making bodies – Ministry of Education or similar	5
Lack of curricular flexibility (which allows articulating initiatives with curricular programs)	4
Lack of confidence and training to teach about the ocean	3
Physical distance to the ocean	3
Lack of interest in working on the ocean theme	2
Lack of interest on the part of students in studying and exploring the ocean theme	0
Lack of support from the Blue School coordination	0





From their experience, teacher training is the most relevant activity that should be addressed for Blue Schools at the moment (Figure 4) to engage and give support to more teachers and schools to the program.

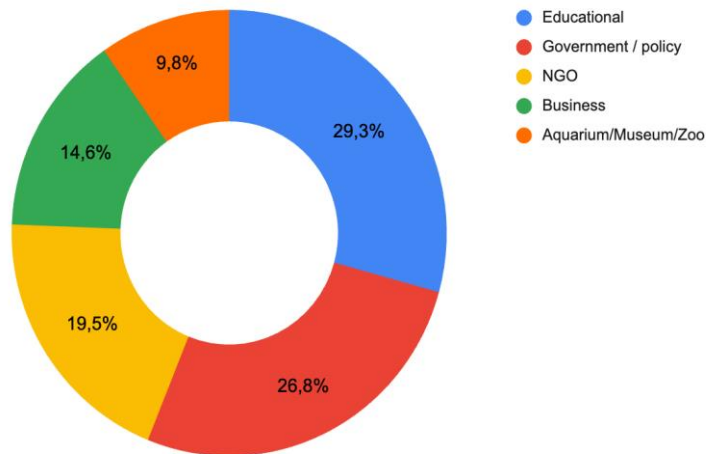


**Figure 4.** Number of answers related to what activities are most relevant for Blue School in the view of the AA-BSN National Coordinators.

***Main results by Stakeholders evaluation***

By January 2023, 41 stakeholders from 6 countries (Portugal, Angola, Nigeria, South Africa, Mexico and Argentina) had answered the survey.

Most of the results were from stakeholders related to the educational area (Figure 5), also with answers from government representatives, NGO, business sector and Aquarium/Museums sector. Most of the activity carried out by them with Blue Schools were lectures, visits to the institution, and offer experiential learning, although a range of other activities from teacher training to artistic activities were also mentioned (Table 7).



**Figure 5.** Percentage of different groups of stakeholders that answered the survey.

**Table 7.** Numbers of answers concerning what type of activity stakeholders carried out with the Blue School.

What activities did you carry out with the Blue Schools?	# answers
Lectures	21
Visits to the institution	20
Experiential learning (field visits, experiments, or practical activities)	15
Workshops	13
Volunteering actions with the school community (e.g. cleanup action, biodiversity protection)	12
Providing your own OL educational resources	11
Pre-service teacher training	9
Practical activities (artistic expressions, sports) in the classroom	6
Internships for students	2
Theater/cinema/cultural activities	2
Qualified teacher training	1
Creation of an extracurricular club	1
Tutoring	1
I do not know how to answer	1



When considering the challenges to implement Blue Schools, stakeholders, as well as the AA-BSN National Coordinators indicated lack of funding to implement activities (Table 8). Accordingly, difficult for schools to travel to the activity site or institution came in second place as an obstacle, and for teachers and AA-BSN National Coordinators, it came in first place. Showing that if funding comes generally to address this one item, it may unlock this obstacle and boost more partnerships and a bigger number of schools and students engaged in Ocean Literacy.

The fourth most voted on the list was the insufficient lead time for schools to get involved, and it appeared on the teachers' list as well (Table 4). In fact, in most countries school calendars run differently from the calendar year that most NGOs, governmental bodies and businesses follow. And if we consider the Atlantic countries, where we find countries from both hemispheres, each of with a specific school calendar, matching all school calendars may be very complex. Though it might be seen as an opportunity to start one global event, a date, or period of time, when all Atlantic Blue Schools and its stakeholders come together for a single call to action to begin a ripple that may turn bigger each year.

**Table 8.** Barriers to implement Blue Schools projects from stakeholder's point of view.

Obstacles faced	# answers
Lack of funding to implement activities	22
Difficulty for schools to travel to the activity site or institution	17
Lack of human resources/time of the institution	13
Insufficient lead time for schools to get involved (your timescales did not match school planning timescale)	12
Lack of contact (interest) on the part of teachers	9
Insufficient preparation/background of students for the activity	4
Resistance of families to children's participation in certain activities (sports and outdoor activities)	4
No obstacle	4
(Dis)Interest/relevance on the part of students	1
Not enough flexibility for schools to develop activities coherently and with a fixed duration	1
Non-articulation between the activities proposed and the curriculum learning goals	0

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